Terms of Reference

Revalidation of Social Survey/Census and Updating the existing Resettlement Plan (RP) for the K-IV Augmentation Project Routes:

Route 1 (Reservoir 1 to the Y Junction in Landhi, carrying 65 MGD)

Route 2 (Route 2A - Reservoir 2 To Sir Syed University Near Nipa and Route 2B - from Hasan Square to Gulbai)

Route 3 (Reservoir 3 to Qasba and Banaras, carrying 65 MGD)

1. Background

The K-IV Augmentation Project is part of KWSSIP-2 (Karachi Water and Sewerage Services Improvement Project - Phase 2), a critical, multi-million-dollar strategic initiative designed to drastically scale up Karachi's bulk water supply network and bridge the city's severe water deficit.

Financed jointly by the World Bank and the Asian Infrastructure Investment Bank (AIIB) alongside counterpart cost-sharing from the Government of Sindh (GoS) on a 40:40:20 basis, this phase focuses on transforming the transmission and distribution infrastructure required to deliver an additional 260 MGD (Million Gallons per Day) of clean water to Karachi's citizens along with other projects. The project is being implemented by the Government of Sindh through the Karachi Water and Sewerage Corporation (KWSC), utilizing a dedicated Project Implementation Unit (PIU) – KWSSIP that manages day-to-day procurement, engineering oversight, and strict compliance monitoring.

The K-IV Augmentation Project aims to enhance bulk water supply to Karachi by connecting the K-IV reservoirs and treatment systems to the city’s existing water supply network through major transmission pipelines.

KIV Augmentation Works, designed to deliver approximately 260 MGD (Million Gallons per Day) of water from three (03) reservoirs to Karachi's existing water networks. The plan involves the installation of three new water supply routes:

- Route 1: A 28 km pipeline from Reservoir 1 to the Y Junction in Landhi, carrying 65 MGD of water.
- Route 2: A 39.5 km pipeline from Reservoir 2 to Gulbai, carrying 130 MGD.
- Route 3: A 28.5 km pipeline from Reservoir 3 to Qasba and Banaras, carrying 65 MGD.

A Resettlement Plan (RP) has been prepared for the K-IV Augmentation project in accordance with the Environmental and Social Framework (ESF) of the World Bank. The existing RP identifies that demolition of permanent structures is not foreseen, and no physical relocation of houses or permanent commercial structures is involved. The impacts will be limited to the static but shift-able and mobile kiosks / vendors etc. and restricted access to businesses / shops.

Following refinement of the pipeline alignments and prior to commencement of civil works, it is necessary to revalidate the RP along the finalized pipeline routes to confirm the current status of affected assets and persons. The revalidation will help update the inventory of losses, census of affected persons, and compensation estimates, ensuring that the RAP reflects correct realities and mitigation measures remain consistent with applicable ESS5 and Sindh Resettlement and Rehabilitation (R&R) Policy implementation requirements.

Based on the project design, the proposed pipeline will pass through the government land owned. The project activities will be undertaken within the government-owned land and no privately-owned land to be acquired for the construction activities of the project.

The PIU-KWSSIP intends to engage a qualified consulting firm to undertake the revalidation of the Resettlement Plan for the K-IV Augmentation Project having the following pipeline routes:

a- Route – 1, which is a 28 km pipeline from Reservoir 1 to the Y Junction in Landhi, carrying 65 MGD of water.
b- Route – 2 (2A and 2B) which is a 39.5 km pipeline from Reservoir 2 to Gulbai, carrying 130 MGD - 96" pipeline from Reservoir 2 To Sir Syed University Near Nipa designated as Route-2A and 72" pipeline from Hasan Square to Gulbai designated as Route-2B.
c- Route – 3 which is a 28.5 km pipeline from Reservoir 3 to Qasba and Banaras, carrying 65 MGD.

1.1. Right of Way (RoW) Details

It is pertinent to mention that the 96-inch diameter pipeline will be laid along Route-2A, extending from Reservoir-2 to Sir Syed University. In accordance with the approved K-IV Augmentation RP, the RP revalidation survey and impact assessment for this section shall cover the defined project Right of Way (RoW) of 10 meters [1], comprising 5 meters on either side of the pipeline center-line. The survey shall identify and assess all Project Affected Persons (PAPs), assets, land uses, businesses, structures, access constraints and other potential impacts falling within this defined RoW.

Similarly, for the remaining section of Route-2 (Route-2B), as well as Routes 1 and 3, where 72-inch diameter pipelines will be installed, the RP revalidation survey and impact assessment shall cover the 10-meters RoW specified in the approved RP, comprising 5 meters on either side of the pipeline center-line. The assessment shall cover all permanent and temporary impacts associated with the proposed works within this RoW, including impacts arising from trenching, construction activities, machinery movement, pipe handling/stacking, access restrictions and other construction-related activities, as applicable.

The census, socio-economic survey and Inventory of Losses (IOL) shall enumerate all persons, assets and activities located within the full width of the approved RoW. All potentially affected persons within this corridor will be enumerated against a single, publicly disclosed cut-off date, minor engineering refinements that remain within the surveyed corridor (for example, a lateral shift of the trench within the RoW, adjustment of working space, pipe stacking or machinery movement areas, or relocation of valve chambers within the RoW) will not require a fresh census.

[1] Resettlement Plan - K-IV Augmentation – Section 1.5.4 - Page No. 10 (https://www.kwssip.gos.pk/wp-content/uploads/2025/10/251024-Merged-RP-Final-April2024.pdf)

Such changes shall be handled through verification and updating of the existing census and IOL records for the affected segment only.

A repeated or supplementary census survey may, however, be required where: (i) the alignment or any project component, including temporary works areas, falls outside the surveyed corridor; (ii) new impacts, new categories of affected persons, or a significant change in the magnitude of impacts are identified; (iii) a significant time lapse occurs between the census and the start of civil works in a section, such that the census no longer reflects actual ground conditions; or (iv) the PIU determines that the census data is no longer valid. In such cases, the census and IOL shall be updated for the affected segment(s), and the RP revised accordingly.

Figures 1 to 4 below is showing the route alignment.

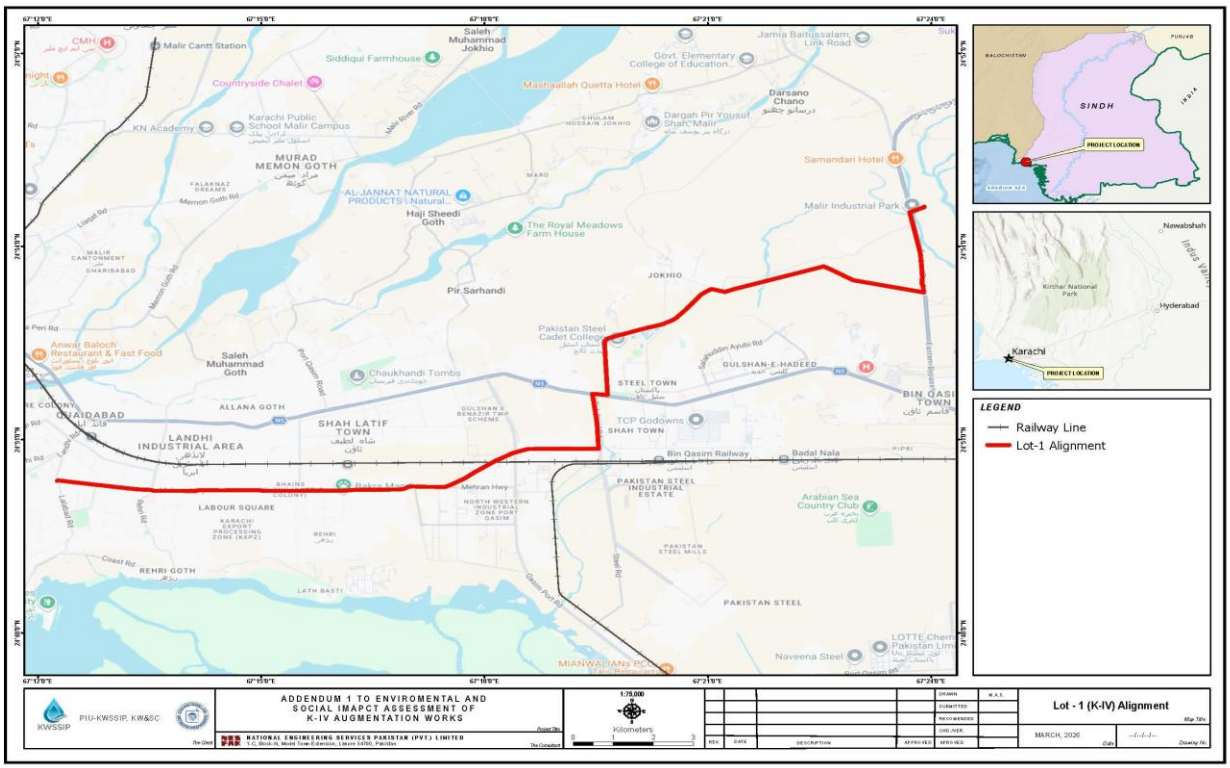


Figure 1: Water Transmission Main 96" R1 From Filtration Plant to Y Junction (Route-1)

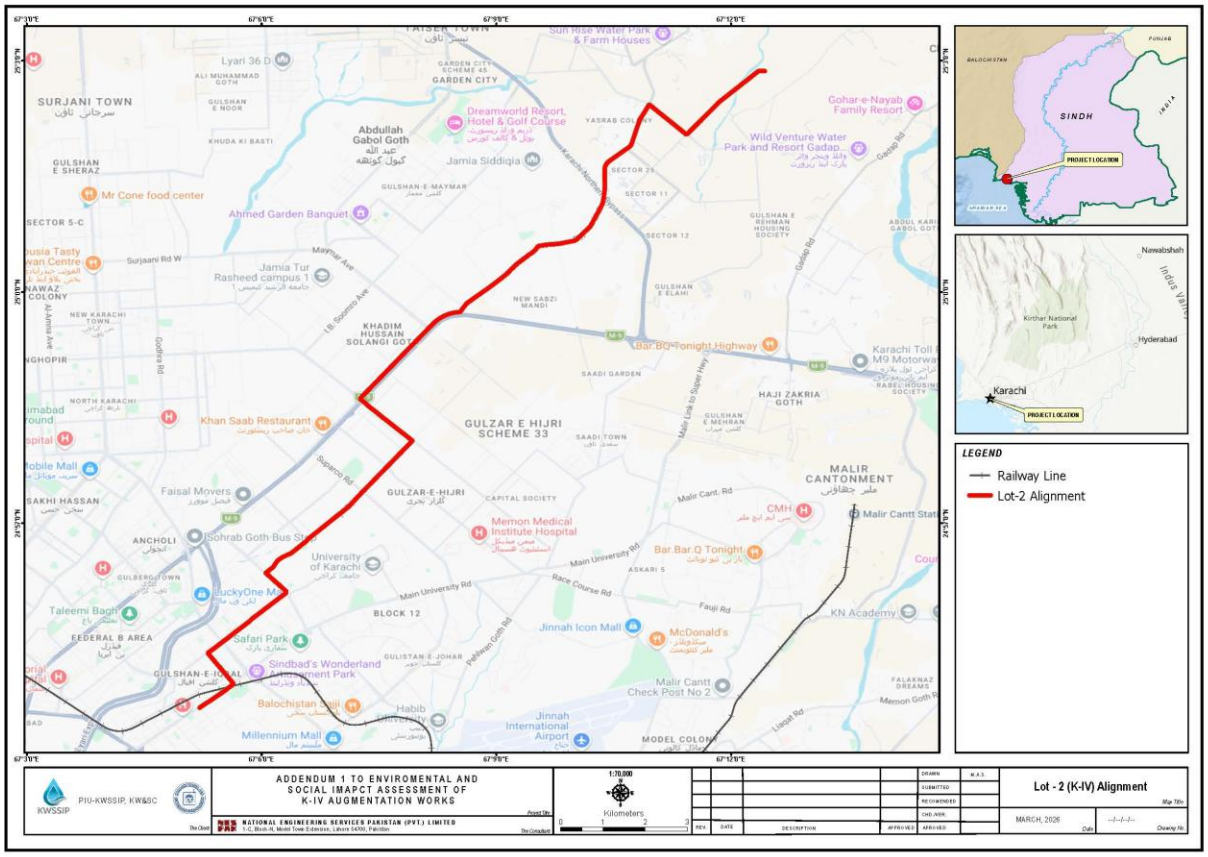


Figure 2: Water Transmission Main 96" From Reservoir 2 to Sir Syed University Near Nipa (Route-2A)

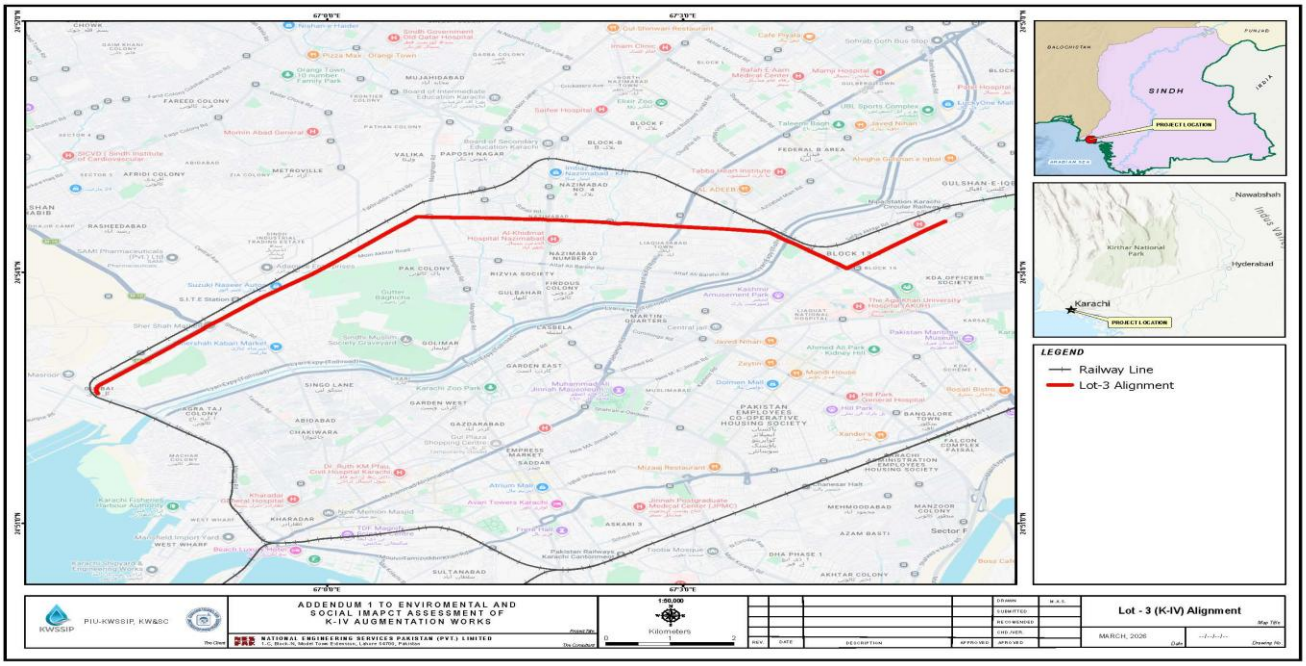


Figure 3: Water Transmission Main 72" Ø Pipeline from Hasan Square to Gulbai (Route-2B)

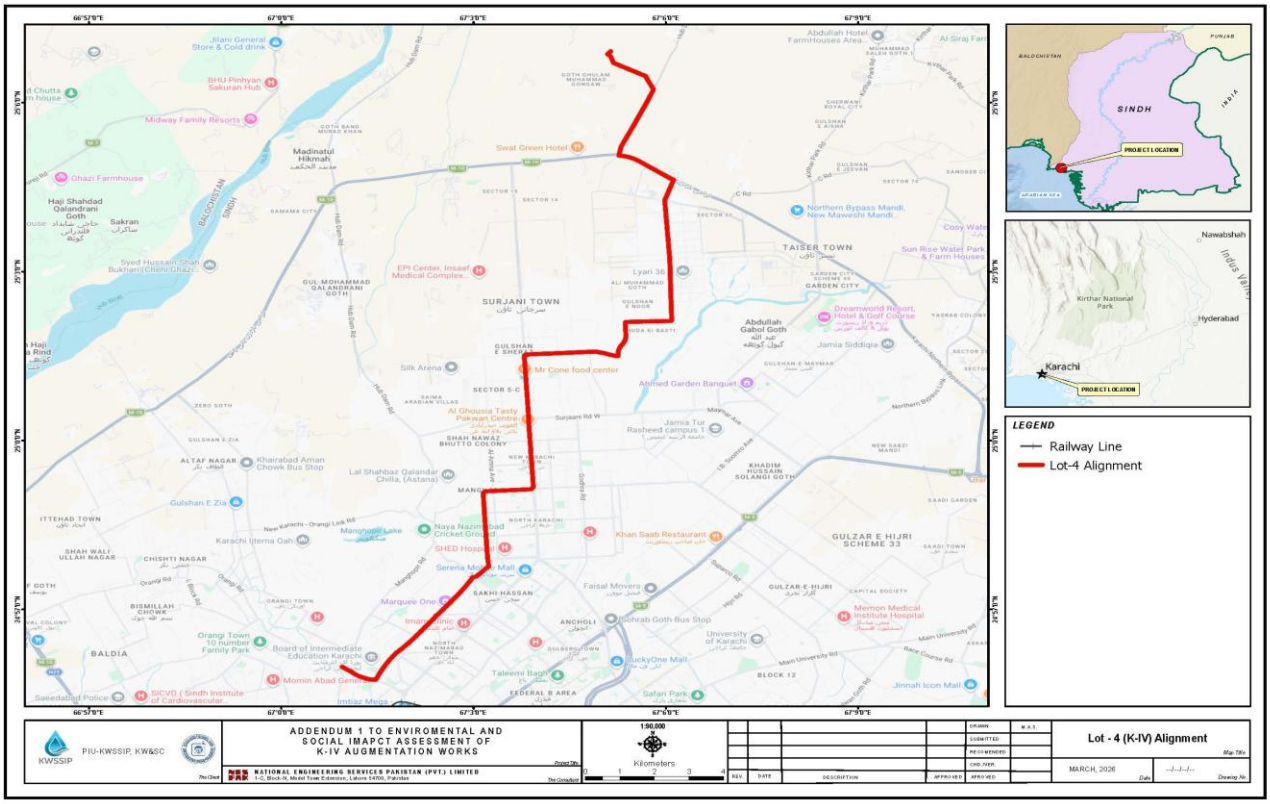


Figure 4: Water Transmission Main "72" Ø Pipeline from R3 to Banaras (Route-3)

2. Objectives of the Assignment

The objective of this assignment is to perform revalidation surveys and update the Resettlement Plan of the K-IV Augmentation project along the finalized pipeline routes.

The specific objectives include:

- Verify the current status of affected structures, businesses, and other assets along the pipeline alignments.
- Update the census of affected persons and Inventory of Losses (IOL) including loss of livelihoods, where required.
- Identify any new impacts or changes in impacts resulting from route refinement or changes in site conditions.
- Update the compensation estimates and entitlement requirements based on verified impacts.
- Conduct stakeholder consultations with Project Affected Persons (PAPs) and communities.
- Revise the RP as per World Bank ESF as well as Sindh Resettlement and Rehabilitation (R&R) Policy and engagement till the clearance of RP from the World Bank.
- Revise/develop the inventory of socio –economic conditions of the PAPs
- Prepare and submit section-wise RP implementation plans and schedules to facilitate timely compensation activities prior to commencement of civil works.

3. Scope of Services, Tasks (Components) and Expected Deliverables

The consulting firm shall undertake the following tasks.

3.1. Review of Existing Documents

The Consultant shall review relevant project documentation including but not limited to:

- Existing Resettlement Plan for the K-IV Augmentation Project
- Project design drawings and finalized pipeline alignments
- Environmental and Social Impact Assessment (ESIA)
- Applicable national laws and regulations related to land acquisition and resettlement
- World Bank Environmental and Social Framework requirements
- Previous survey databases and social baseline information.

3.2. Route Segmentation and Mobilization

The Consultant shall:

- Fully familiarize with the project foot-print and project area.
- Divide the pipeline alignments into manageable sections based on geographical and operational considerations.
- Develop a field deployment strategy with a clearly defined cut-off date to prevent opportunistic claims and ensure that only eligible persons are compensated.
- A key risk during RAP revalidation, especially after long delays is that opportunistic actors may enter the project area, build structures, or assert land claims to qualify for compensation. A new cut-off date can also create a window for abuse.
- To mitigate this risk, the cut-off date and its implications should be widely communicated before and during any census or revalidation through multiple channels, including radio, community meetings, printed notices, billboards in local languages, and notifications to local leaders. New entrants should be clearly informed that anyone entering the areas after the cutoff date will not be eligible for compensation. The consultant may also use photographic and aerial documentation taken around the cut-off date.
- Prepare a detailed work plan to ensure completion of field verification within the specified timeframe.
- As part of the Inception Report, the Consultant shall prepare maps showing the tentative boundaries of potentially affected areas along the R1, R2 and R3 alignments, based on the available design information and initial assessment.

3.3. Coordination with the Engineer and PIU

- The Consultant shall work in close coordination with the PIU and the Engineer throughout the assignment. The Engineer shall provide the Consultant with the latest approved engineering designs, alignment information, construction methodology, section-wise implementation schedule, and any subsequent design refinements relevant to the RP revalidation.
- The Consultant shall ensure that stakeholder consultations, disclosure activities, and community awareness programmes are coordinated with the Engineer to maintain

consistency of information, avoid duplication of consultations, and ensure that uniform messages are communicated to affected communities.

- The Consultant shall undertake surveys covering the full width of the approved RoW, based on the latest detailed design, actual project footprint, and construction methodology provided by the Engineer, to ensure that all alignment modifications and project components falling within the surveyed corridor are adequately captured.

3.4. Data Collection, Management and Submission Requirements

The Consultant shall develop, maintain and submit all census, socio-economic survey, asset inventory, entitlement and PAP databases in a standardized digital format prescribed by the PIU to ensure compatibility with subsequent RAP implementation, compensation processing and monitoring activities.

The Consultant shall submit all datasets in editable MS Excel (.xlsx) format (and, where applicable, GIS-compatible shapefiles/KML or geodatabase formats) together with supporting scanned documents, photographs and metadata. All datasets shall be complete, validated, free from duplication and linked through unique identification codes.

As a minimum, the PAP database shall include, where applicable:

- Unique PAP Identification Number;
- Household Identification Number;
- Name of PAP;
- Father's/Husband's Name;
- Gender;
- CNIC Number;
- Contact Number(s);
- Residential Address;
- GPS Coordinates/Location;
- Type of PAP (Owner, Tenant, Business Operator, Employee, Squatter, Encroacher, Vulnerable PAP, etc.);
- Vulnerability Category;
- Asset Type and Description;
- Asset Dimensions/Quantity;
- Eligibility Category;
- Entitlement Category;
- Compensation Amount;
- Bank Account Details (where required for compensation);
- Photograph(s);
- Survey Date;
- Enumerator Name;
- Verification Status;
- Remarks.

The Consultant shall ensure that all digital records are internally cross-referenced and traceable to the corresponding field survey forms, photographs, valuation sheets and supporting documentation.

3.5. Field Verification of Impacts

The Consultant shall undertake section-wise field surveys along the pipeline routes using multiple survey teams working simultaneously to:

- Verify Right-of-Way conditions and alignment on ground.
- Identify affected structures, businesses, tenants, employees, vendors, and other assets.
- Verify existing encroachments and informal activities.
- Identify temporary access restrictions and potential livelihood/business disruption during construction.
- Identify impacts on public infrastructure and utilities.
- Record geographic coordinates and photographic documentation.
- Conduct consultations with PAPs and ensure that all consultations are properly recorded and documented and maintain comprehensive records and documentation of the consultation process and outcomes.
- Where applicable, prepare options and discuss with the technical team to reduce project impacts, based on consultation with local communities.
- Digitized data system with verification procedures for valuation reports, payments, and entitlements. Qualified staff will manage census data and the system, reducing the risk of late claims or PAP list manipulation; and ensure accuracy and consistency.

3.6. Update of Census and Inventory of Losses

Where required, the Consultant shall:

- Develop/update inventory of socio-economic conditions of the PAPs
- Update the census of PAPs.
- Update the Inventory of Losses (IOL).
- Verify ownership or tenure status of affected structures and businesses.
- Document impacts on livelihoods and commercial activities including temporary business interruption and access restrictions.
- Identify vulnerable households requiring special assistance.

3.7. Stakeholder Consultations

The Consultant shall conduct consultations with:

- Affected persons including affected business owners, shopkeepers, tenants, employees, vendors, and vulnerable PAPs.
- Market/traders, associations or business representatives, where available.
- Local communities including nearby residents, shopkeepers, vendors, and other livelihood groups within the project area.
- Local administration and relevant government departments
- Other relevant stakeholders as per the Stakeholder Engagement Plan (SEP)

The consultations shall focus on:

- Project awareness, expected temporary impacts and construction schedule.
- Proposed mitigation measures, including access management during construction.
- Entitlement provisions for eligible PAPs, including business owners, tenants, employees, vendors, and vulnerable PAPs, where applicable.

- Grievance Redress Mechanism (GRM).
- Socio-economic baseline conditions of the PAPs.
- Stakeholder concerns, feedback, and recommendations for minimizing adverse impacts.

3.8. Community Awareness Regarding Survey and Eligibility

The Consultant shall develop and implement an appropriate stakeholder communication strategy before and during the survey activities. Prior to commencement of the census, the Consultant shall clearly communicate to all potentially affected persons that:

- Participation in the census or socio-economic survey does not automatically establish eligibility for compensation or resettlement assistance;
- The purpose of the survey is to identify all persons and assets that may potentially be affected within the construction corridor;
- Eligibility for compensation shall only be determined after finalization of the engineering design, confirmation of actual project impacts, application of the approved cut-off date, and assessment in accordance with the approved Resettlement Plan and the World Bank ESS5 requirements;
- Only persons whose land, structures, businesses, livelihoods or other eligible assets are confirmed to be affected by the final project design shall qualify for compensation and assistance.

The Consultant shall ensure that these messages are consistently disseminated through community meetings, consultations, public notices, information leaflets, signboards, and the Project GRM. Records of awareness activities shall be maintained as part of the stakeholder engagement documentation.

3.9. Assessment of Additional Impacts

The Consultant shall identify and document:

- Any new affected persons or assets not captured in the existing RP
- Changes in magnitude or type of impacts
- Additional livelihood (temporary or permanent) impacts.
- Any changes in vulnerability status or newly identified vulnerable PAPs.
- Any other relevant social risks requiring mitigation measures.
- Fresh census survey will be conducted, along with the establishment, disclosure, and dissemination of a new cut-off date.

3.10. Updating Compensation and Entitlement Estimates

Based on verified impacts, the Consultant shall:

- Update compensation estimates.
- Confirm applicability of the entitlement matrix and recommend revisions where gaps are identified.
- Identify livelihood restoration measures where required.
- Provide revised estimates of the resettlement budget if necessary.

3.11. Preparation of Updated Resettlement Plan

The Consultant shall prepare an updated Resettlement Plan, including:

- Section-wise validation findings
- Updated census and inventory of losses database
- Update socio-economic baseline conditions of PAPs
- Updated compensation estimates
- Updated entitlement matrix, where required
- Maps showing affected locations
- Photographic documentation
- Consultation records including key concerns/ views raised and how these were taken into account in preparation of RP.
- Updated implementation schedule, institutional responsibilities, and Grievance Redress Mechanism (GRM) arrangements.
- Establish implementation arrangements with designated responsibilities in consultation with the PIU.
- The Consultant should implement schedule covering all RP activities including preparation, implementation, and monitoring and evaluation. This schedule should identify the target dates for delivery of benefits to affected persons and a clearly defined closing date. This schedule should indicate how the RP activities are linked to the implementation of the overall project.
- Establish monitoring and evaluation systems, define responsibilities, timeframe, and include some key indicators for internal and external/independent monitoring and evaluation.
- The plan should include provisions for adapting resettlement implementation in response to unanticipated changes in project conditions, or unanticipated obstacles to achieving satisfactory outcomes.
- The Consultant should indicate the arrangements for RP disclosure in order to make them accessible to the PAPs.
- Executive summary (with a summary in Urdu/Sindhi for disclosure);
- Methodology of the revalidation survey;
- Vulnerability assessment and assistance measures for vulnerable PAPs;
- Updated compensation and resettlement budget;
- Conclusions and recommendations.

4. Team Composition and Qualification Requirements for Key Experts

The consulting firm having proven experience of conducting similar nature of assignments shall mobilize qualified experts to undertake the assignment. The proposed team shall include, at a minimum:

S. No.	Title	Professional Qualifications, Experience and Skills

1	**Team Leader / Senior Resettlement Specialist**	**Qualifications & Experience:** • Advanced degree in Social Sciences, Development Studies, Sociology, Anthropology, or a related field. • Minimum 15 years of professional experience in preparation, implementation, monitoring and evaluation of Resettlement Plans (RAPs), Abbreviated RAPs (ARAPs), and social safeguards instruments. • Demonstrated experience in land acquisition, involuntary resettlement, livelihood restoration, stakeholder engagement, and grievance management. • Mandatory experience working on projects financed by the World Bank or other international development agencies. **Skills Required:** • Resettlement planning and implementation monitoring. • Land acquisition and compensation verification. • Livelihood restoration assessment. • Stakeholder engagement and conflict resolution. • Social safeguards compliance under World Bank ESF/ESS5. • Team leadership and supervision. • Report writing and analytical skills. • Coordination with government agencies and communities

2	**Social Development Specialist (04 Nos.)**	**Qualifications & Experience:** • Minimum 8 years of relevant experience in social impact assessment, resettlement surveys, socio-economic studies, and social safeguards implementation. • Experience in field consultations, vulnerability assessments, gender-inclusive engagement, GRM implementation, and data verification. **Skills Required:** • Social impact assessment and analysis • Socio-economic survey design and implementation • Community consultation and stakeholder engagement • Vulnerability and gender analysis • Grievance Redress Mechanism (GRM) monitoring • Data collection, validation and reporting • Field coordination and communication skills
3	**GIS / Mapping Specialist**	**Qualifications & Experience:** • Relevant qualification in GIS, Geomatics, Geography, Surveying, Remote Sensing, or related discipline. • Experience in GIS mapping, spatial analysis, geo-referencing, route alignment mapping, and preparation of project maps. **Skills Required:** • GIS and spatial data analysis • Geo-referencing and GPS data management • Mapping of affected assets and project corridors • Database management and visualization

		• Preparation of route maps and thematic maps • Use of GIS software and digital mapping tools
4	**Field Supervisors (10 Nos.)**	**Qualifications & Experience:** • Relevant experience in supervising field surveys, census activities, inventory of losses, and socio-economic data collection. • Experience in managing survey teams and ensuring data quality assurance. **Skills Required:** • Field survey supervision and coordination • Census and asset inventory verification • Quality control and data validation • Team management and logistics coordination • Stakeholder interaction and issue resolution • Documentation and reporting
	Gender Specialist (01Nos.)	Qualifications & Experience: • Master's degree in Gender Studies, Social Sciences, Development Studies or a related field. • Minimum 8 years of experience in gender analysis, gender-inclusive consultations and GBV/SEA/SH risk assessment in infrastructure or resettlement projects. • Experience on World Bank or other international development agency financed projects preferred. • Skills Required: • Gender analysis and collection of gender -disaggregated data • Facilitation of women-only consultations and FGDs, including with female-headed households and women vendors

		• Identification of gender-specific impacts and vulnerabilities • GBV/SEA/SH risk screening and referral pathways • Gender-responsive entitlement and livelihood restoration measures.
	Community Liaison Specialist (03 Nos. One per route, at least one female)	Qualifications & Experience: • Bachelor's degree in Social Sciences or a related field. • Minimum 5 years of experience in community mobilization, stakeholder engagement and grievance handling in urban infrastructure projects, preferably in Karachi. • Fluency in Urdu and Sindhi; knowledge of other local languages is an advantage. Skills Required: • Community mobilization and information disclosure • Communication of the cut-off date and eligibility messages • Coordination with local administration, traders' associations and community leaders • Grievance uptake, recording and referral • Documentation of consultations and awareness activities
	Valuation Engineer (02 Nos.)	Qualifications & Experience: • Bachelor's degree in Civil Engineering, registered with the Pakistan Engineering Council. • Minimum 8 years of experience in valuation of structures, assets and business losses for land acquisition and resettlement. • Knowledge of replacement cost methodology under World Bank

		ESS5 and applicable schedules of rates in Sindh. Skills Required: • Measurement and quantification of affected structures and assets • Assessment of replacement cost of structures, kiosks and improvements • Estimation of business and income losses in coordination with the social team • Market rate surveys • Preparation of valuation sheets and the resettlement budget
5	**Enumerators / Surveyors (100 Nos.)**	**Qualifications & Experience:** • Experience in conducting socio-economic surveys, household interviews, asset inventories, and community consultations. • Familiarity with digital data collection tools and field survey methodologies. **Skills Required:** • Household and socio-economic surveys • Community engagement and communication • Data collection and recording • Mobile/GPS-based survey tool • Interviewing and stakeholder interaction • Accurate documentation and record keeping.

The Consultant shall deploy multiple field teams simultaneously to complete the assignment within the stipulated timeframe.

4.1. Duration, Deliverables, Timeline and Payment Schedule

The total duration of the assignment shall be **90 calendar days. Please see the timeline and payment schedule below the table.**

Payments shall be released based on the satisfactory completion and acceptance of the following deliverables:

S. No.	Deliverable	Timeline	Payment %
1	Inception Report including detailed methodology, route segmentation, stakeholder engagement approach, survey tools, and work plan	Within 15 days of contract signing	10% of the Total Contract Amount
2	Progress Briefs covering field progress, surveys completed, consultations undertaken, key findings, and challenges encountered The Inception Report shall also include maps showing the tentative boundaries of potentially affected areas along the Route-1, Route-2 (2A and 2B) and Route-3 alignments, prepared on the basis of the available design information and the Consultant's initial assessment.	Weekly during field implementation period	N/A
3	Draft Updated Resettlement Plan (RP), including Complete Digital PAP Database (comprising census, socio-economic survey, asset inventory, entitlement matrix, GIS data, photographs, and supporting documents in the prescribed format), updated census and socio-economic survey data, inventory of losses, stakeholder consultations, entitlement verification, and implementation arrangements.	Within 60 days of contract signing	35% of the Total Contract Amount
4	Feedback incorporation of PIU and WB	Within 15 Days of submission of Draft Updated RP	N/A
5	Final Updated RP (after incorporating comments of PIU / WB and Final Clearance from PIU)	Within 90 days of contract signing	55% of the Total Contract Amount

Taking into account the time required for mobilization, section-wise census and IOL along approximately 96 km of pipeline routes, valuation, preparation of the draft RP, and review by the PIU and the World Bank, the total duration of the assignment is revised to 90 calendar days (about three months) from contract signing, as set out below. The Consultant shall remain engaged until World Bank clearance and disclosure of the final RP.

The field programme shall be sequenced in line with the planned onboarding and mobilization of the civil works Contractor. Sections where the Contractor is scheduled to mobilize first shall be surveyed first. Where required by the PIU, the Consultant shall provide section-wise census and IOL survey's findings for these priority sections ahead of the full RP, so that compensation for those sections can be planned and paid before civil works begin. In line with ESS5, no civil works shall start in any section until compensation and assistance for that section have been fully provided**.**

a- Submission Requirements

- **Hard Copies:** Three (03) copies of each report
- **Electronic Copies:** PDF and editable formats
- **Database:** Digital dataset of survey information

b- Client's Input and Counterpart Personnel

1- Services, Facilities and Property to be made available to the Consultant

The Client will provide:

- Access to the existing Resettlement Plan and related E&S documents
- Available project design drawings and pipeline alignment maps
- Coordination with relevant departments and project stakeholders
- Support in arranging meetings with local authorities where required.

2- Counterpart Personnel

The following personnel from the Project Implementation Unit will coordinate with the Consultant:

- Senior Environmental Specialist (Team Lead E&S Section)
- Senior Social Development Specialist

These personnel will facilitate review of deliverables and coordination with project stakeholders.

4.2. Data Confidentiality and Information Security

The Consultant shall treat all personal, financial and socio-economic information collected during the assignment as confidential.

The Consultant shall:

- use the information solely for implementation of this assignment;
- restrict access to authorized personnel only;

- not disclose, share or publish any personal information without prior written approval of the Employer;
- comply with applicable national laws and the World Bank Environmental and Social Framework (ESS1 and ESS5) regarding protection of personal information.