

Karachi Water and Sewerage Services  
Improvement Project (KWSSIP)

# Environmental and Social Screening Report – Additional Works

Improvement of Water Supply & Sewerage  
in Soba Nagar / Gohrabad

**04 March 2026**

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## 1. Introduction

An Environmental and Social Management Plan (ESMP) was prepared in June 2023 and implemented for the Soba Nagar sub-project under KWSSIP-1 prior to commencement of construction works. During implementation, the project scope has been expanded to include:

- Four (04) additional streets that were initially excluded from the approved scope; and
- A 6-inch diameter water supply pipeline connection from the Soba Nagar water tank to the nearest main line, with an approximate length of 609 meters.

This Environmental and Social (E&S) Screening Report has been prepared to address the environmental and social impacts associated with these additional works, in line with the World Bank Environmental and Social Safeguards and KWSSIP requirements.

## 2. Description of Additional Works

### 2.1. Additional Streets

- Installation of water supply pipelines in the 04 additional streets located in Gohrabad<sup>1</sup>, of approximately 6000 running foot length.
- Provision of house connections.
- Excavation, trenching, backfilling, and compaction.
- Restoration of road surfaces and affected infrastructure.

### 2.2. 6-inch Water Supply Pipeline Connection

- Excavation and installation of approximately 609 m long high density polyethylene (HDPE) pipeline<sup>2</sup>.
- Jointing, testing, and commissioning.
- Temporary traffic management and reinstatement of road surfaces.

### 2.3. Duration of Works

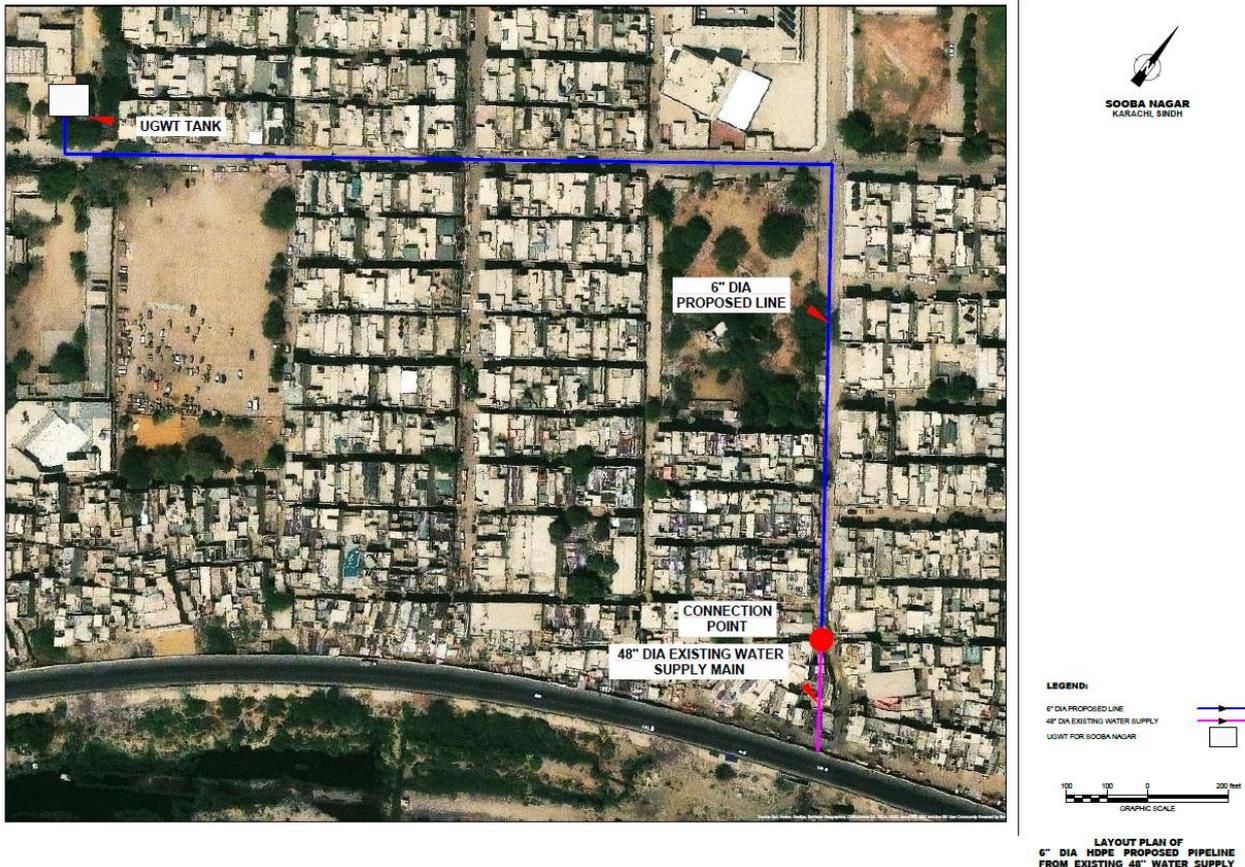
The duration of works for the pipeline connection will be approximately 2 to 3 days, while the water pipeline laying and connections in the additional streets are expected to take approximately three weeks, with the major excavation and pipeline laying activities to be completed within one week.

Layout map of the water supply line is provided as **Figure-1**:

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<sup>1</sup> These streets fall under the jurisdiction of KMC, and the design/layout is currently under preparation by NESPAK. The environmental and social (E&S) assessment has been carried out based on past experience and anticipated impacts, which are expected to be similar to those previously assessed, as the physical dimensions and characteristics of these streets are broadly comparable to the originally approved streets.

<sup>2</sup> Originally, a 6-inch diameter pipeline was planned to be connected to the main water supply line of KWSC with an 8-inch diameter in the Gulberg area. However, KWSC has dropped this connection due to low pressure in the main line, which led to the identification of an alternative alignment. This revised alignment is therefore covered under the present screening report.



**Figure-1: Layout Plan of 6" HDPE Proposed Pipeline from Existing 48" Water Main to Underground Tank at UC-06 Office**

The nature of these works is similar to the activities covered under the original ESMP.

Photographs showing the project area are as follows:





### 04 Additional Streets



### 3. Clarification Regarding Private Plot Located Near Soba Nagar / Goharabad

A private plot located at coordinates 24.921077, 67.078464, which was previously sub-judice, has recently been decided in favor of the owner. The owner has initiated development activities reportedly for a private housing scheme. The said plot is located in the broader vicinity of Soba Nagar and Goharabad; however, it is important to clarify that the ongoing Water Supply and Sewerage Rehabilitation works under KWSSIP (Katchi Abadies component – Soba Nagar / Goharabad) are not designed to serve or connect this private development. Map showing the location of this private housing scheme is as follows:



**Figure-2: Location of the Private Housing Scheme – Soba Nagar**

The area is predominantly surrounded by already established settlements with existing water supply and sanitation systems. The KWSSIP water supply main line merely passes along the periphery of the subject plot while connecting Soba Nagar and Goharabad settlements. There is no proposed distribution network, service connection, or sewerage infrastructure planned within or for the private plot.

From both:

- an **Environmental and Social (E&S) screening perspective**, in line with the eligibility criteria for Katchi Abadi interventions; and
- a **technical design perspective**, as the system capacity has been calculated strictly based on the population of the identified beneficiary settlements,

there is no requirement or provision to extend KWSSIP-supported infrastructure to this private housing development. Accordingly, the private plot does not fall within the project scope, nor is it considered part of the beneficiary area under the approved subproject design.

#### **4. Environmental & Social Risk Classification and Screening**

Based on screening, the additional works are classified as **Low to Moderate Risk**, consistent with the original Soba Nagar sub-project.

**Key characteristics:** - Urban residential setting. - No land acquisition or physical displacement. - No impacts on environmentally sensitive areas. - Temporary and localized construction-related impacts.

**Table-1** as follows is providing a detailed overview of E&S screening carried out for the additional activities:

<b>S. No.</b>	<b>Screening Aspect</b>	<b>Key Issues / Risks</b>	<b>Significance (Low/Moderate/High )</b>	<b>Mitigation / Management Measures</b>	<b>Responsibility</b>
1	Land Use & Ownership	Works within existing ROW and streets in katchi abadi; no land acquisition required	Low	Ensure works remain within the designated ROW through clear on-site demarcation and worker awareness. Any encroachment or dispute shall result in immediate work suspension and resolution through PIU coordination.	PIU / Consultant / Contractor
2	Environmental Impacts – Excavation	Dust generation, noise, debris, traffic disruption	Moderate	Dust suppression, controlled working hours, proper waste disposal, traffic management plan	Contractor / Supervision Consultant
3	Waste Generation	Excavated soil and construction debris	Moderate	Segregation, reuse where possible, disposal at designated sites	Contractor / Supervision Consultant
4	Water & Soil Pollution	Risk of contamination from construction activities	Low	Proper handling of fuels/materials; no discharge into drains	Contractor / Supervision Consultant
5	Public Health & Safety	Risks to residents due to open trenches, equipment, and traffic	Moderate	Barricading, signage, safe access for pedestrians, awareness to community	Contractor / Supervision Consultant
6	Occupational Health & Safety (OHS)	Risks to workers during excavation and pipe laying	Moderate	PPE, toolbox talks, safety supervision, compliance with ESMP	Contractor / Supervision Consultant

S. No.	Screening Aspect	Key Issues / Risks	Significance (Low/Moderate/High)	Mitigation / Management Measures	Responsibility
7	Social Impacts	Temporary disturbance to residents, shops, and mobility	Moderate	Advance notice to community, grievance redress mechanism (GRM), phased construction	PIU / Contractor / Supervision Consultant
8	Vulnerable Groups	Impacts on women, children, elderly, and disabled persons	Low–Moderate	Safe crossings, consultation with community representatives	PIU / Contractor / Supervision Consultant
9	Stakeholder Engagement	Need for information sharing with residents	Moderate	Community consultations and disclosure of information	PIU / Contractor / Supervision Consultant
10	Compliance with WB E&S Safeguards	Activities fall within scope of existing ESMP	-	Preparation of E&S Screening Report	PIU / Consultants
11	Required E&S Instrument	E&S Screening Report	-	Preparation and approval prior to construction	PIU / Consultant

## 5. Potential Environmental and Social Impacts

### 5.1. Environmental Impacts

The proposed works, involving excavation for sewer and water pipelines and related infrastructure within existing streets and ROW in Soba Nagar, may result in the following temporary and localized environmental impacts:

#### a- Air Quality Impacts:

Dust emissions from excavation, material handling, vehicle movement, and stockpiling of excavated soil.

#### b- Noise and Vibration:

Noise and minor vibrations generated by construction machinery and equipment, potentially affecting nearby residents.

#### c- Waste Generation:

Generation of excavated soil, construction debris, and packaging waste, which may cause environmental nuisance if not properly managed.

#### d- Traffic and Access Disruption:

Temporary obstruction of streets and pedestrian pathways due to open trenches and construction activities.

#### e- Risk to Underground Utilities:

Potential damage to existing water supply lines, sewer lines, gas pipelines, and telecom cables during excavation works.

**f- Soil and Water Contamination Risks:**

Minor risk of soil and water pollution due to improper handling of fuels, lubricants, and construction materials.

Overall, these impacts are expected to be temporary, localized, and manageable through appropriate mitigation measures.

## **5.2. Social Impacts**

The proposed works may result in the following social impacts:

**a- Temporary Disturbance to Communities:**

However, no direct livelihood impacts are envisaged, short-term inconvenience may still be caused to residents, shopkeepers, and road users due to excavation and restricted access.

**b- Community Health and Safety Risks:**

Risks to pedestrians, especially children, women, elderly, and persons with disabilities, due to open trenches and movement of construction vehicles.

**c- Occupational Health and Safety Risks:**

Risks to workers during excavation, pipe laying, and material handling activities.

**d- Impacts on Vulnerable Groups:**

Temporary mobility constraints and safety concerns for vulnerable groups within the katchi abadi.

**e- Potential Community Grievances:**

Complaints related to noise, dust, access restrictions, or delays in construction activities.

These impacts are assessed as low to moderate in significance and reversible in nature.

## **6. Mitigation Measures**

### **6.1. Environmental Mitigation Measures**

To address the identified environmental impacts, the following mitigation measures shall be implemented:

**a- Dust Control:**

- ✓ Regular water sprinkling on excavated areas and unpaved surfaces.
- ✓ Covering of transported materials and stockpiles.
- ✓ Safe driving training for all the drivers working at the project.

**b- Noise Management:**

- ✓ Use of well-maintained and low-noise equipment.
- ✓ Restriction of construction activities to daytime working hours where feasible.

**c- Waste Management:**

- ✓ Segregation of excavated soil and construction debris.

- ✓ Reuse of suitable excavated material where possible.
- ✓ Disposal of surplus material at designated and approved disposal sites.

**d- Traffic and Access Management:**

- ✓ Implementation of a Traffic Management Plan attached as **Annexure – I**.
- ✓ Phased excavation to minimize disruption.
- ✓ Provision of temporary access to houses and businesses.

**e- Protection of Utilities:**

- ✓ Coordination with utility service providers prior to excavation.
- ✓ Careful excavation near existing underground services.

**f- Pollution Prevention:**

- ✓ Proper storage and handling of fuels and chemicals.
- ✓ Prohibition of waste discharge into drains or water bodies.

**6.2. Social Mitigation Measures**

To minimize social impacts, the following measures shall be adopted:

**a- Community Awareness and Communication:**

- ✓ Advance notification to residents and shopkeepers regarding construction schedules and expected disruptions.
- ✓ Display of information boards at construction sites.
- ✓ Continued liaison with the UC office bearers.

**b- Community Health and Safety:**

- ✓ Installation of barricades, warning signs, and reflective tapes around open trenches.
- ✓ Provision of adequate lighting at night.
- ✓ Safe pedestrian crossings and temporary pathways, with special consideration for vulnerable groups.

**c- Occupational Health and Safety (OHS):**

- ✓ Provision and mandatory use of PPE (helmets, gloves, safety shoes, reflective vests, etc.).
- ✓ Conduct of toolbox talks and safety briefings.
- ✓ Compliance with approved ESMP and WB EHS Guidelines.

**d- Grievance Redress Mechanism (GRM):**

- ✓ Operation of the project GRM to address community complaints.
- ✓ Recording, monitoring, and timely resolution of grievances.

**7. Environmental and Social Management Matrix**

Impact / Risk	Mitigation Measures	Responsibility	Monitoring Indicators
Dust and air pollution	Water sprinkling, covering of materials	Contractor	Visual inspection, complaints
Noise	Restrict work to daytime, equipment maintenance	Contractor	Noise complaints

Impact / Risk	Mitigation Measures	Responsibility	Monitoring Indicators
<b>Construction debris</b>	Approved disposal, debris management plan	Contractor / PIU	Disposal records
<b>Traffic disruption</b>	Traffic management plan, signage	Contractor	Site inspections
<b>OHS risks</b>	PPE, training, toolbox talks	Contractor	Accident records
<b>Community safety</b>	Barricades, lighting, awareness	Contractor	Incident reports

## 8. Implementation Arrangements

- **Contractor:** Update and implement CESMP for additional works based on the approved E&S Screening Report.
- **Supervision Consultant:** Monitor compliance and report monthly.
- **PIU (KWSSIP):** Oversight, coordination, and reporting to the World Bank.

## 9. Monitoring and Reporting

- Daily site supervision by Contractor.
- Monthly E&S compliance reports by Supervision Consultant.
- Periodic audits and inspections by PIU.

## 10. Traffic Management Plan (TMP) – Summary

A Traffic Management Plan (TMP) has been prepared by the Contractor (attached as Annexure – I) to ensure safe, efficient, and orderly movement of vehicular and pedestrian traffic during construction and excavation activities. The TMP aims to minimize inconvenience to the public, maintain access to properties, and ensure safety of workers and road users throughout the project duration.

### 10.1. Key Objectives

- Minimize traffic delays and disruption to local communities and businesses.
- Maintain safe access for residents, emergency services, and public transport.
- Ensure safety of workers, pedestrians, cyclists, and road users.
- Minimize environmental and social disturbances during construction.

### 10.2. Key Measures

- Installation of barricades, safety cones, reflective tapes, and warning signage (Urdu and English).
- Deployment of flagmen and safety personnel at critical locations.
- Provision of safe pedestrian pathways and temporary crossings.
- Implementation of speed control measures and diversion routes where required.
- Restriction of major construction activities to daytime hours (6:00 a.m. – 6:00 p.m.), except in emergencies.
- Community notification regarding traffic diversions and construction schedules.

### 10.3. Site-Specific Controls for 6-inch Pipeline Connection Works

- **Location:** Dastageer Road, Goharabad to Lyari Express Point

- **Pipe Size:** 6-inch HDP Pipe
- **Method:** Open cut trenching / trenchless (where feasible)
- **Estimated Duration:** One month
- **Key Controls:** barricading, signage, lighting, diversion routes, and flagmen.

The Contractor shall implement the TMP in coordination with the Supervision Consultant and relevant authorities, and shall update it as required based on site conditions.

#### **10.4. Stakeholder Engagement and GRM**

- Community consultations to inform residents about additional works.
- Use of existing GRM channels under KWSSIP.
- Documentation and resolution of grievances.

### **11. Social Consultation and Community Assessment**

A social assessment was conducted by the National Rural Support Program (NRSP) on 09 December 2025 in Goharabad (Katchi Abadi) to assess the need and justification for inclusion of the four excluded streets under the KWSSIP project.

#### **11.1. Key Findings**

- **Estimated households:** 213
- **Estimated population:** approximately 1,308 persons
- **Households without formal water connections:** 138
- **Households with irregular/low-pressure supply:** 55
- **Functional water connections:** 20

The assessment identified significant infrastructure gaps, including unreliable water supply, deteriorated drainage systems, open drains, wastewater overflows, and stagnant water, posing serious public health risks.

#### **11.2. Community Readiness and Willingness to Pay**

- 80–85% of households expressed willingness to subscribe to formal water services.
- Communities showed strong preference for transparent billing and reliable service delivery.

#### **11.3. Social and Environmental Justification for Inclusion**

The excluded streets demonstrate: - High vulnerability and service deficits. - Strong community demand and readiness for inclusion. - Elevated environmental and public health risks.

These findings provide strong technical and social justification for inclusion of the four streets within the KWSSIP implementation scope.

#### **11.4. Stakeholders Consultations with Shops / Businesses / Residents and Livelihood Impacts Assessment**

Stakeholder consultations were conducted by the Consultant's Social Development Specialist with 09 shop/business owners and 03 residents located in proximity to the proposed connection pipeline. The consultations included local shopkeepers along the pipeline corridor to inform them about the ongoing water supply works from Dastageer Colony to the UC Office (UGWT location) and to assess any potential disturbances to their livelihoods.

Stakeholders were briefed on the scope and duration of the works, including temporary road closures, and were advised to use alternative access routes where necessary to minimize inconvenience. The Grievance Redress Mechanism (GRM), including the complaint contact

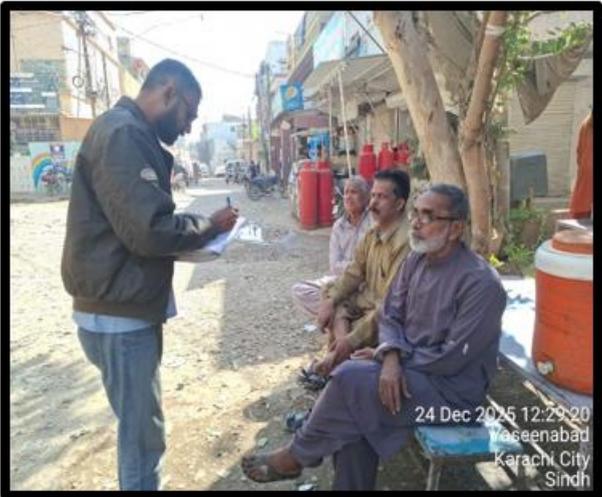
number and availability of an on-site complaint box, was also communicated to ensure timely reporting and resolution of any concerns.

The excavation will be approximately 1-foot-wide for the installation of an HDPE pipeline. Considering the limited trench width and the adequate road width available along the alignment, disruption to livelihood of businesses, shops, or residential access is not anticipated.

At the four additional streets, the proposed works involve the installation of a 3-inch water pipeline and are expected to require approximately one day per street. In view of this, no livelihood impacts are envisaged at these locations.

Stakeholders being contacted include the following:

	<b>Date</b>	<b>Shop / Business / Residence</b>	<b>Name</b>	<b>Designation</b>
1	24-12-2025	Al Madina Barber Shop	Imran	Owner
2		Paradise Kiryana Store	Haris	Owner
3		Mahfooz Sheer mall house	Shakeel	Owner
4		Ghousia Kiryana Store	Abdullah	Owner
5		Khawja Kiryana Store	Yaqoob	Owner
6		Resident	Saleem	Resident
7		New Madina Hotel	Sadam	Owner
8		Hafiz Dairy	M.Salman	Owner
9		Hyder Pakwan Centre	Jameel	Owner
10	17-02-2026	Resident	M.Sardar	Resident
11		Resident	Abdul Majeed	Resident
12		Ali Pakwan Centre	M.Khuwaja	Owner





## 12. Conclusion

This E&S Screening Report for the additional works confirms that the environmental and social impacts of the additional works in Soba Nagar / Gohrabad are limited, temporary, and manageable through implementation of the proposed mitigation measures. The existing ESMP remains applicable, with this screening report as addendum serving to extend its scope to the additional streets and pipeline connection.

Implementation of the additional works shall be carried out in compliance with the ESMP, the E&S Screening report, updated CESMP, Traffic Management Plan, and the World Bank E&S Safeguard requirements.

**Annexure – I**  
**Traffic Management Plan**



## **Traffic Management Plan**

**HDPE pipeline laying from the UC 06 OFFICE Dastagir Road,  
Gohrabad UGWT location to Water Main near Liyari Express  
Way**

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# 1. TRAFFIC MANAGEMENT PLAN

## 1.1 Introduction

This Traffic Management Plan (TMP) has been prepared to ensure the safe, efficient, and orderly movement of vehicular and pedestrian traffic during construction and excavation activities. The plan aims to minimize inconvenience to the public, maintain access to properties, and ensure safety of workers and road users throughout the project duration. This TMP shall be implemented by the Contractor and shall remain effective for the entire construction period unless revised with approval of the Consultant/Client. For the proper implementation of the traffic management plan (TMP), the Contractor will communicate the details of this plan to all personnel on site during the construction phase. The training will be provided for operators and staff personnel. All activities and project work, excluding the arrival and departure of loaded vehicles from or site, shall be carried out between the hours of 6 a.m. to 6 p.m., except on an emergency basis or other situation, depending on site conditions.

This TMP addresses the following Key Issues:

- Safety and amenity of road users and the public.
- Site access and signage.
- Speed limit signage.
- Arrangements to divert traffic (if required).
- Traffic and Safety Management Responsibilities.
- Impact of excavation to local roads.

## 1.2 Objectives and Targets

The objectives and targets include, but are not limited to, the following:

- Keeping traffic delays to a minimum.
- Minimization of disruption to businesses.
- Maintaining satisfactory proper access;
- Minimizing disturbance to the environment.
- Ensuring the safety of employees, contractors, the general public, pedestrians, cyclists and traffic;

## 1.3 Key Traffic Management and Safety Issues

### 1.3.1 Safety and Comfort for General Road Users and Public

Throughout the excavation activity, safety will be considered based on the specific nature of the work. The measures to provide public safety include:

- Key element to providing safety to road users and the construction team. This will be done through the use of barriers, barricading Tape, making of service roads for the contractor's machinery, and availability of flagmen to provide sufficient separation and safety measures to minimise the impact of the works.
- Implementing specific traffic management measures only where necessary to reduce traffic speed, volumes and alignment to provide safety to both construction crews and the public and instruct the vehicle drivers to use the service road.
- Limiting the working hours of work that could pose a substantial impact on road users and the public.
- Minimising disruption during peak traffic periods, public holiday weekends and school holidays by limiting the extent of traffic management undertaken during these times.
- Implementation of visual barriers to reduce the potential distraction of road users.
- Community consultation and notification to keep road users and the public up to date regarding traffic management measures or restrictions.

### 1.3.2 Safety and Comfort for Pedestrians

While planning construction(excavation) activities, safety control measures for pedestrians will be developed. For this purpose, the number of pedestrians, type of their work activity like office, residential, recreational etc., origin and destination points of the pedestrians, number of vulnerable pedestrians like young persons, elderly, vision impaired, disabled persons and Proximity of pedestrian generation developments, such as schools, shopping centers, railway stations, bus terminals.

To provide a safe environment for pedestrians:

- Hazardous areas will be barricaded to restrict physical access.
- Appropriate safety awareness signboards will be placed both sides.
- Pedestrians' pathways will be free of trip hazards.

### 1.3.3 Safety and Comfort for Public Transport

Local roads or House accesses used by public transport will be reviewed to ensure safe alternative or temporary stop locations during the excavation

ongoing. The locations of any alternative or temporary stop locations, including school bus stops, will be confirmed in conjunction with affected transport services and regular users. Accordingly, safety control measures will be developed for the safe movement of the vehicles, especially during peak hours.

## 1.4 Managing Construction Vehicular Movement

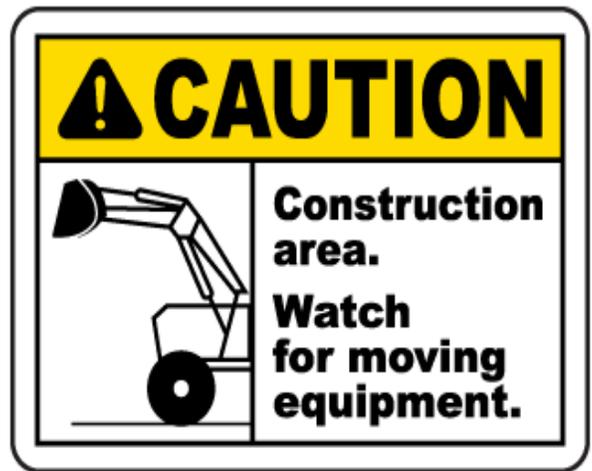
The effective management of construction vehicle movements on site and throughout the road network is critical to the success of all projects. Construction vehicle movements will be planned with the aim of minimizing the risk to other road users and keeping the traffic disturbance through the excavation to a minimum.

## 1.5 Driver's Responsibilities

It will be ensured that drivers employed on the Project understand their responsibility to drive safely. Moreover, the credibility of drivers will be assessed on the basis of past experience, reviews from previous employees, license, knowledge, and training, etc.

## 1.6 Road Safety Barriers

Safety barriers will be used, especially in areas where traffic is diverted from one route to another. To enhance the visibility of safety barriers, reflective tapes along with safety signage are used.



## 1.7 Signage

Different types of signboards will be used during the excavation of the work, like existing information signage, speed limit signage, safety information signage, directional signage for local roads, and warning signage, etc.





### 1.7.2 Studs

Studs will be used throughout the project site to control vehicle speed. High-profile and low-profile studs will be used at places according to their requirement. They shall be used to reduce vehicle speed, segregate lanes, at diversions, at access and egress routes, near schools and public places and construction sites.

### 1.7.3 Traffic Triangles

Traffic triangles will be used to alert other drivers to potential issues ahead on the road.

It is commonly used when a vehicle is parked or disabled near moving traffic, alerting other drivers at a safe distance to slow down.



## 1.8 Transport of Equipment and Materials

It will be the responsibility of the Contractor to ensure that all equipment and/or materials transported to or from the Site shall be appropriately secured to, or contained in, vehicles. No construction vehicle shall be loaded more than its manufacturer-specified weight-bearing capacity.

Equipment
HDP Pipes
Butt Fusion Machine
Warning signs

## 2. Traffic Management Plan for UC office underground Water Tank to Water Main near Liyari Express

### 2.1 Traffic Management Plan (TMP) for Laying of 6" HDP Pipe

- Project Corridor: UC Office
- Location: Dastageer Road, Gohara bad, Karachi
- Pipe Size: 6-inch HDP Pipe
- Method of Installation: Open Cut Trenching / Trenchless (where feasible)
- Estimated Duration: one month
- Stakeholders: Traffic Police, KMC, KDA, KW&SC, KWSSIP, NESPAK (J.V) and Contractor

### 2.2 Work Zone Layout

- Barricading:
  - Barricades with reflective safety cones on both sides will be used.
  - Ensure a 3.5 m wide space for emergency and local access.

- **Warning Signage:**
  - “Work Ahead”,
  - “Diversion ahead”,
  - “Speed Limit 20 km/h”,
  - Use signs (Urdu + English).
- **Lighting/Night Visibility:**
  - Flashers and reflectors for night visibility.
  - Solar lights where no street lighting exists.

### 2.3 Traffic Control Personnel

Position	Quantity	Shift pattern	Responsibilities
Flagman	2 personnel	12-hour shifts	Work zone access control
Safety officer	1 officer	Day shift only	Pedestrian management

## 3. Traffic Management and HDP Pipe Laying Plan

### 3.1 Excavation: Dastageer Road, Goharabad to Layyari Express Point

**Activity:** Open trench excavation on the right side of the main carriageway.

**Purpose:** Laying 6" HDP pipeline.

### Traffic Impact:

- Diversion to the service road on the left.
- Traffic safety cones are placed 1.5 m ahead of the excavation both sides.
- Informational signage: “Pipe Laying Ahead – Use both sides .

### Traffic Impact:

- Minimal disruption on the surface level.
- Temporary barricades and equipment area marked.
- Flagmen was deployed to ensure smooth turning movement.

## 3.2 Overall Safety & Management Measures

To ensure smooth traffic management and public safety during excavation, the following measures will be implemented;

- Bilingual signboards (Urdu + English)
- Barricades, safety cones
- Dedicated diversion routes
- Site-specific flagmen

These measures will help guide commuters effectively, reduce the risk of accidents, and maintain safe traffic flow around the construction zones.