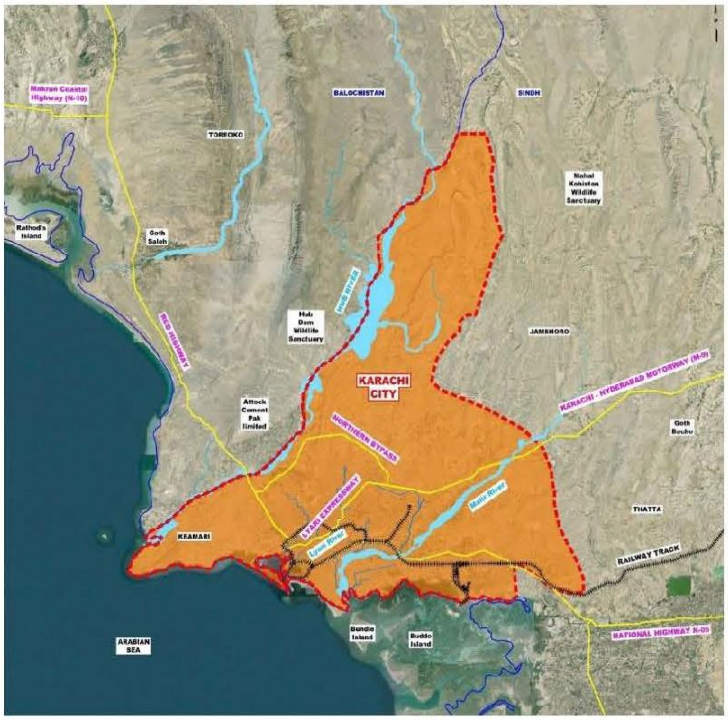
PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP
KARACHI WATER & SEWERAGE BOARD (KWSB)

KWSSIP | Karachi Water and Sewerage Services Improvement Project

ENVIRONMENTAL & SOCIAL SCREENING REPORT



Final Report

REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

October, 2022

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REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1); First Karachi Water and Sewerage Services Improvement Project (KWSSIP-1)

ENVIRONMENTAL AND SOCIAL SCREENING REPORT

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LIST OF ABBREVIATIONS / ACRONYMS

AC	Asbestos Cement
AED	Anti-Encroachment Drive
AIDS	Acquired Immunodeficiency Syndrome
AIIB	Asian Infrastructure Investment Bank
ARAP	Abbreviated Resettlement Action Plan
BOQs	Bills of Quantities
CC	Construction Contractor
CHS	Community Health & Safety
CLICK	Competitive and Livable City of Karachi
DC	Design Consultants
DCP	Dichlorine Phosphate
E&S	Environmental and Social
E&SS	Environmental & Social Safeguards
ECOPs	Environmental Code of Practices
EHS	Environmental Health & Safety
EMF	Environmental Management Framework
ESC	Environmental and Social Cell
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plans
GBV	Gender Based Violence
GoS	Government of Sindh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HIV	Human Immunodeficiency Virus
HSE	Health Safety and Environment
KMC	Karachi Metropolitan Corporation
KWSB	Karachi Water and Sewerage Board
KWSSIP	Karachi Water and Sewerage Services Improvement Project
M&E	Monitoring and Evaluation
MS	Mild Steel
NOC	No-Objection Certificate
O&M	Operation and Maintenance
OCHS	Occupational and Community Health and Safety
OPs	Operational Policies
PCR	Physical Cultural Resource
PE	Polyethylene
PIU	Project Implementation Unit
PM	Project Manager
PPE	Personal Protective Equipment
PRCC	Pre-Stressed Reinforced Cement Concrete
RCC	Reinforced Cement Concrete

RPF	Resettlement Policy Framework
SC	Supervision Consultant
SDS	Social Development Specialist
SEPA	Sindh Environmental Protection Agency
SMF	Social Management Framework
STI	Sexually Transmitted Infections
WB	World Bank
XEN	Executive Engineer

1. INTRODUCTION

1.1 Overview

The First Karachi Water and Sewerage Services Improvement Project (KWSSIP-1), funded by World Bank (WB) and Asian Infrastructure Investment Bank (AIIB), is an initiative of Government of Sindh (GoS) through Karachi Water and Sewerage Board (KWSB) to improve water and sewerage services in Karachi.

In compliance with the local regulations and WB safeguard policies, this Screening Report has been prepared to assess potentially adverse environmental and social impacts of a KWSSIP-1 subproject comprising repair/replacement of damaged sections of water lines and sewers in different districts of Karachi.

Karachi with an estimated population of 16.02 million, is Pakistan's largest city, economic financial hub and main seaport. Recent rain events have severely damaged the water and sewerage infrastructure of the city. It has been assessed that the present water supply network including both water trunk mains and the distribution mains have developed leakages while the sewerage system has also developed crown failure of its joints in the sewerage pipes at different locations in almost all districts of Karachi. Furthermore, many roads have been affected and require patch-work repair. Considering this situation, under Competitive and Livable City of Karachi (CLICK) project (World Bank funded) surveys have been initiated by their consultants for undertaking the repair and rehabilitation of road patches in Karachi city. PIU-CLICK will carry out repair of roads in form of patch work for 268 roads across the Karachi city as identified by relevant government departments. Initially, as emergency work, about 56 roads have been taken up by Karachi Development Authority (KDA) for repair and rehabilitation of road patches. In the meantime, Project Implementation Unit (PIU) of KWSSIP has been entrusted the task to identify and carry out the repair of water supply and/or sewerage lines under the selected patches of 56 roads after conducting a comprehensive survey to identify the locations of the damaged sections of water supply and sewerage networks and the extent of the damages to carry out their repairs/replacement. After completion the repair /replacement of water and sewerage network by KWSSIP-1, repair and rehabilitation of roads will be carried out on the damaged road sections under the project "CLICK".

1.2 Subproject Objectives

The main objective of the subproject as agreed in between PIU-CLICK and PIU-KWSSIP are as follows:

- Only those water supply and sewer lines will be catered which are at present leaking or sunken down to be identified after joint survey by the Consultant, PIU and relevant operation and maintenance (O&M) staff of KWSB.

- Selection for repairing existing water supply and sewer portions will be based upon the identified location of the above survey as well as the information received from the CLICK

where repair the roads will be carried out through necessary patchwork to make them motorable. The study team in coordination with KWSB will figure out the condition of the system and suggest necessary repair if required.

1.2.1 Purpose of the Document

The current report presents findings of environmental and social (E&S) screening for repair/replacement of damaged sections of water lines and sewers in different districts of Karachi.

1.2.2 Institutional Responsibility

The Project Implementation Unit (PIU) has been established under KWSB which is headed by Project Director. The PIU has an Environmental and Social Cell that is responsible for the environmental and social management of the project and compliance with the regulatory and WB policy requirements. Organization chart of PIU is given in **Figure 1.1**.

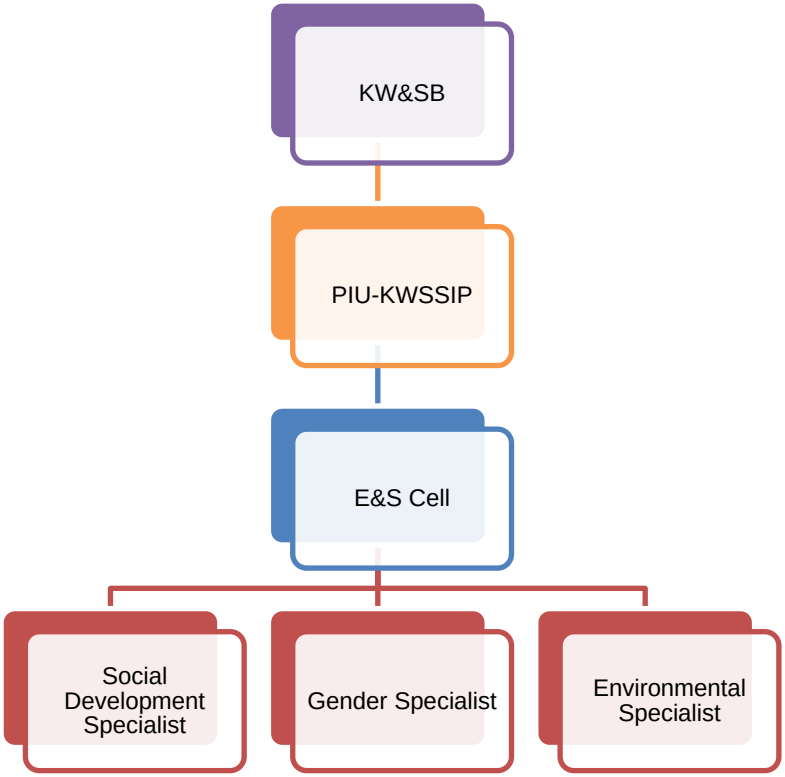


Figure 1: PIU Organization

1.2.3 Subproject Location

The proposed subproject sites are located in all the seven districts of Karachi including East, Korangi, Malir, Central, West, Keamari and South. The location plan is described later in the document (see **Section 3**).

1.2.4 Objectives of Environmental & Social Screening

Following are the objectives of E&S Screening:

- Conduct a detailed environmental and social screening including Anti Encroachment Drive (AED) screening of all sites of the subproject, and prepare respective instruments.
- Prepare Environmental and Social Management Plans (ESMP) for the subproject and their budgets in accordance with the Bank's Operational Policy 4.01 (OP-4.01), OP-4.12 and other applicable safeguard policies and the Environmental Management Framework (EMF) and Social Management Framework (SMF) prepared for KWSSIP-1.
- Prepare the Abbreviated Resettlement Action Plans (ARAPs)/Resettlement Action Plans (RAPs), if required, in the light of the RPF (Resettlement Policy Framework) embedded in the Bank's approved Social Management Framework for KWSSIP-1.

1.2.5 Environmental Management Framework and Social Management Framework

An Environmental Management Framework (EMF) was prepared for KWSSIP-1 in 2019 with the purpose to establish principles, rules, guidelines and procedures to ensure compliance of the Project with the environmental safeguard requirements of the national laws and World Bank's safeguard policies. The EMF sets out the policies, strategies, procedures and institutional requirements to screen the project activities, and also identifies the environmental documents required for these activities and the approval and clearance procedures to be followed.

Similarly, a Social Management Framework (SMF) including a Resettlement Policy Framework (RPF) was prepared for the KWSSIP-1 in 2019 with the aim to assess potential adverse social impacts of the envisaged subprojects to be financed under the project and ways to avoid, minimize or mitigate them through the establishment of clear procedures and methodologies for planning, screening, review, approval and implementation of subprojects. SMF policy principles include transparency, inclusion, participation, social accountability and social safeguards that will be mainstreamed by adopting appropriate processes for social impact assessment and mitigation.

2. REGULATORY REVIEW

2.1 Overview

Three sets of laws, policies and strategies i.e., national, provincial, and World Bank Operational Policies (OPs) are applicable for the project. **Table 2.1** presents a list of these laws, policies and strategies.

Table 2.1: Applicable Laws, Policies, Standards and Strategies

Key National Laws, Regulations and Policies	**1.**	National Conservation Strategy 1992
	2.	Pakistan Climate Change Act, 2016
	3.	Pakistan Penal Code 1860
	4.	Canal and Drainage Act 1873
	5.	Land Acquisition Act, 1894 (Including Later Amendments)
	6.	Protection of Trees and Brushwood Act, 1949
	7.	Antiquities Act 1975
	8.	Pakistan Labor laws
	9.	Fatal Accidents Act 1855
Key Provincial Laws, Regulations and Policies	**1.**	Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021
	2.	Factories Act, 1934 and The Sindh Factories (Second Amendment) Act, 2021
	3.	Sindh Wildlife Protection, Preservation, Conservation and Management Act, 2020
	4.	Karachi Strategic Development Plan, 2020
	5.	The Sindh Occupational Safety and Health Act, 2017
	6.	Sindh Sanitation Policy, 2017
	7.	Sindh Drinking Water Policy, 2017
	8.	The Sindh Prohibition of Employment of Children Act, 2017
	9.	Sindh Environmental Quality Standards, 2016
	10.	Sindh Minimum Wages Act, 2015 (Sindh Act No. VIII of 2016)
	11.	The Sindh Bonded Labor System (Abolition) Act, 2015
	12.	Sindh Workers Compensation Act, 2015

	13.	Sindh Environmental Protection Act (SEPA), 2014
	14.	The Sindh Industrial Relations Act, 2013
	15.	Sindh Local Governments Act (SLGA), 2013
	16.	The Protection Against Harassment of Women at the Workplace Act, 2010
	17.	Sindh Cultural Heritage (Preservation) Act 1994
	18.	Sindh Solid Waste Management Board Act 2014
	19.	The Sindh Transparency and Right to Information Act, 2016
	20.	Sindh Payment of Wages Act 2015
	21.	Sindh Minimum Wages Act, 2015
	22.	The Sindh Commission on the status of Women Act, 2015
	23.	The Sindh Differently Able Persons Act, 2017
	24.	Forest Act (1927) and the Forest Act (Sindh amendment) Act, 2012
	25.	Sindh Public Property Act, 2010
	26.	Sindh Plantation, Maintenance of Trees and Public Parks Ordinance, 2002
Applicable World Bank Policies/ Framework	**1.**	World Bank Operational Policies
		Environmental Assessment (OP 4.01) *Natural Habitat (OP 4.04)* *Physical Cultural Resources (OP 4.11)* *Involuntary Resettlement (OP 4.12)* *Gender Policy (OP 4.20)* *Access to Information (BP 17.50)*
	2.	Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx
	3.	Environmental, Health & Safety Guidelines

3. DESCRIPTION OF SUBPROJECT

3.1 Components of Subproject

The proposed subproject comprises the repair/ rehabilitation of following components:

- Bulk Water Supply
- Water Supply Distribution Network
- Sewerage Network

In the above-mentioned components following works shall be executed;

- Repair of joints.
- Repair of sluice valve.
- Repair/replacement of pipes (sewer & water).

Major activities involve in the proposed subproject are described as under:

Demolition Works/ Dismantling

- The existing structures i.e. roads and pavements shall be demoslished/ dismantled. The demolished/ rejected debris materials shall be broken to pieces not larger than 25mm (1 inch) to 75mm (3 Inches). All materials resulting from demolition shall be disposed of out of Municipal limits preferably at the dumping site near Nazimabad and Gaddap.

Earthwork

- Earthwork shall include site preparation, excavation of soil, disposal of excess excavated material, shoring and protection work, backfill, surface reinstatement etc.

Repair of Joints/Valves

- Demaged/leaked joints and valves of bulk water lines and distribution network shall be repaired or replaced as the case may be.

Replacement of Pipes (Water & Sewerage)

- Demaged pipes (both water and sewerage) will be replaced with new pipes.

Comprehensive environment and social screening were carried out for all the priority 56 sites. In view of urgency of works, those sites where some technical, environmental and social

issues were identified have been excluded from the priority 56 sites. Due to completion of road patch work by Karachi Metropolitan Corporation (KMC) and technical design issues, about 29 sites were excluded from the subproject. In remaining 27 sites, five sites may have social issues and involvement of temporary business loss. These five sites were also excluded from the project. Based on the environmental and social screenings, 22 sites were selected for the subproject. Location maps of the subproject sites are given in Annexure-10. The details of selected subproject sites are described in **Table 3.1**.

Table 3. 1: Description of Subproject Activities

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
		District East		
1	Shahzad Khalid Road	Diameter= 24" Material= Pre-Stressed Reinforced Cement Concrete (PRCC) Depth= 7'-0" Repair= 1 Joint to be repaired	Diameter= 6" Sluice Valve Material= Polyethylene (PE) Depth= 5'-6" Repair= Sluice valve needs to be changed	No
2	Jamalluddin Afghani Road	Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 1 joint to be repaired	No	No
3	Sharfabad Chowrangi at Jamalluddin Afghani Road	Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 2 to 3 joints to be repaired	No	No
4	Shaheed-e-Millat Service Road, Right Side just before Tariq Road	No	No	Diameter= 12" Material= Reinforced Cement Concrete (RCC) Depth= 4' to 6' Repair/Replacement Length = 200'
5	Jahangir Road	No	No	Yes
6	Jail Road in front of Jail Gate	Diameter= 33" Material= PRCC Depth= 8' Repair= 20 joints to be repaired	No	No

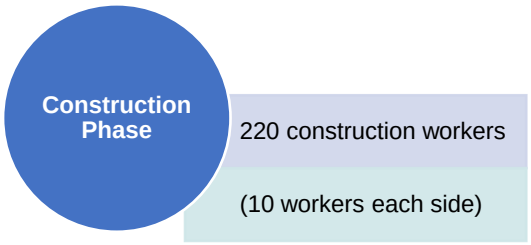
Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
7	Shahrah-e-Qaideen Khudadad Colony (Mazar-e-Quaid Underpass)	No	No	Diameter= 24" Material= RCC Type= 7' to 8' Repair/replacement = 300'
8	Near FTC Flyover, Shahrah-e-Faisal	Diameter= 15" Material= Mild Steel (MS) Depth= 9'-6” Repair= 7’, 3 joints to be repaired	No	No
District Korangi				
9	11000 Road from 12000 Road to 14000 Road	No	No	Diameter= 18 & 24”" Material= RCC Depth= 3' to 5' + Dia Repair= 2000' 18” & 2000’ 24”
10	Jamia Millia Road after Malir 15	No	No	Diameter= 36" Type= RCC Depth= 10ft+Dia Repair= 250ft
11	Malir Halt Flyover	Diameter= 33" Material= PRCC Depth=8ft+diameter Repair= 300’	No	Gate Valve Required
12	Under Korangi Flyover	No	Diameter= 33" Material= PRCC Depth=9’-6” Repair=10 Joints & 300’	Diameter= 24" Material= RCC Depth= 12’ to 14’ Repair= 1000'
District Malir				

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
13	Zafar Town Road between Manzil Pump to Younus Chowrangi	Diameter= 48" Material= PRCC Depth= 10' Repair= 6 joints	Diameter= 4" & 6" Material= PE Depth= 6ft+Diameter Repair= 4" 200' & 6" 200'	No
14	Near Gulshan-e-Kaneez Fatima	No	Diameter= 18" Material= PRCC Depth= 6' Repair= 5500'	No
15	Saba Cinema to Jamali Bridge	Diameter= 54" Material= PRCC Depth= 8'+Diameter Repair= 50ft length	No	No
District Central				
16	Road 7000 (Godra)	No	No	Diameter= 36" Material= RCC Depth= 18' Repair= 8350'
17	Road 6000 (Yousuf Goth Allah Wali)	No	Diameter= 12" Material= PE Depth= 6' Repair= 6,500' length	No
18	Mukka Chowk Comprehensive School	No	Diameter= 18",6" Material= Asbestos Cement Depth= 6ft+Diameter Repair= 25' length of 18" Diameter line 250' length of 6" diameter line	No

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
19	Nairan Cinema, Liaqatabad, S.M. Toufeeq Road	Diameter= 24" Material= Not Known Depth= 8'+Diameter Repair= 10 ft & 2 Joints	No	No
20	Katti Pahari	No	Diameter= 4" (AC), 6" (CI) Material= AC (Asbestos cement), CI (Cast Iron) Depth= 5ft+Dia Repair= 5' length of 4" diameter line, 5' length of 6" diameter line,	No
District Kemari				
21	Shershah Roundabout	Diameter= 24" Material= Not Known Depth= 12' Repair= 10' – 15' length of Pipeline	No	No
22	Nourus Chowrangi	No	Diameter= 12", 18" Material= PE Depth= 7'-8' Repair= 150' to 200' length of Pipeline	No

3.1.1 Workforce Requirement

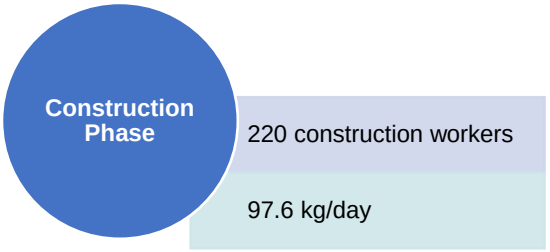
Manpower requirement during rehabilitation and construction is given as under:



No manpower will be required during operation phase. Operation of these sites will be carried out by KWSB as routine works.

3.1.2 Solid Waste Generation

Solid waste generation during construction by contractor's labour is given as under;

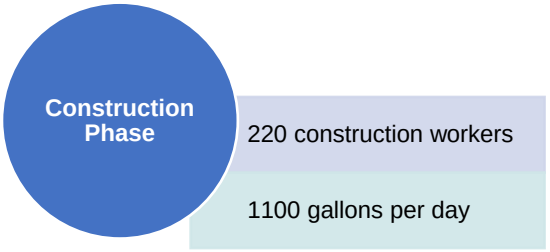


Waste Generation Rate = 0.44kg/capita/day
Ref: Pakistan – Waste Management Report, 2020

The construction waste mostly includes road debris and waste pipes. The quantity of construction debris will be difficult to assess as it varies site-wise. Further, most of excavated material will backfilled. Around 14,000 ft of sewers (various diameters) shall be replaced and around 13,000 ft of water supply pipes (various diameters) shall be repaired.

3.1.1 Water Requirement

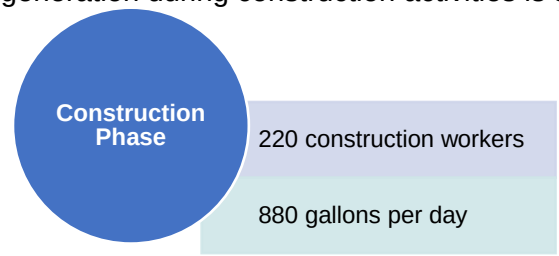
The domestic water requirement by contractors' labour for the proposed project activities is summarized hereunder:



The given quantity refers to domestic water requirements. The water required for construction activities will be arranged by the contractor. During construction, water will be used for making mortar for jointing of sewer lines and will be of negligible quantity.

3.1.2 Wastewater Generation

The domestic wastewater generation during construction activities is summarized hereunder:



For construction activities, water will be used for preparation of mortar and negligible quantity of wastewater will be generated.

3.1.3 Construction Camps

As stated earlier that the project activities are spread over the entire city, therefore a centralized construction camp will not be required. The proposed project activities shall be carried out at multiple locations simultaneously. The contractor shall set up temporary tent facilities for provision of clean drinking water and sanitation facilities for the minimum of 10 workers at each site.

4. STAKEHOLDER ENGAGEMENT

4.1 Stakeholders Consultation

The stakeholder's engagement and consultations have been carried out for the proposed project by following the methodological steps, guidelines and procedures for environmental and social screening defined in the Environmental Management Framework (EMF) and Social Management Framework (SMF).

In order to meet the criteria of meaningful stakeholder consultation process, the consultation was started in October 2022. The consultations were conducted with various potential stakeholders to assess their views and recommendations.

The overall objective of the consultation was that stakeholders are kept informed about the project related activities and to identify any contextual issues by obtaining their views and inputs about any Project related issue. Henceforth, the feedback obtained/PIU responses to the issues raised, are directly included as part of the Project planning and decision-making process.

4.1.1 Identification of Stakeholders

All stakeholders have different types of stakes according to their occupations and involvements in various aspects of the Project. The consultant contacted with all the stakeholders at different stages of the Project and shared their views and concerns with respect to implementation of the Project. Following categories of stakeholders were identified:

Institutional Stakeholders;
Local community;
Commuters/ road users;
Local business owners etc.

4.1.2 Objectives of the Public Consultation

The objectives of the public consultation are as follows;

- To share full information with the stakeholders about the Project;
- To obtain feedback/responses about the proposed project;
- To identify the urgency and severity of issues and problems in project; and
- To acquire responses about the needs, preferences/priorities of the stakeholders.

4.1.3 Information Disseminated

Following issues were discussed with the affected during the consultation meetings:

- Introduction of the project;

- Description of various project components;
- Information on perceived benefits from the proposed project;
- Information regarding Grievance Redress Mechanism (GRM) and lodging of complaints during construction activities; and
- Needs, priorities and reactions of the affected people regarding the proposed project.

4.1.4 Schedule of Consultations

Eight (08) public consultation meetings, four (04) departmental meetings and multiple individual consultations were conducted with the identified stakeholders. Schedules of consultation meetings given below in **Table 4.1.**

Table 4. 1: **Schedules of Consultation Meetings**

Sr. No.	Location	Date / Time	Venue	No of Participants
1	Katti Pahari	13-10-2022 04:00 pm	New Quetta Malang Jaan Restaurant	14 Persons
2	Korangi Flyover	14-10-2022 11:00 am	Under Korangi Flyover	18 Persons
3	Korangi Flyover	14-10-2022 12:00 pm	I. Area Korangi 5 No. (Muuna Bhai General Store)	15 Persons
4	Mehran Depot Morr	14-10-2022 03:00 pm	Haji Rahim Khan Village	28 Persons
5	Shershah Chorangi	15-10-2022 10:00 am	Shershah Chorangi	20 Persons
6	Nourus Chorangi	15-10-2022 12:00 pm	Quetta Hotel	14 Persons
7	Shahrah e Qaideen	15-10-2022 02:00 pm	Mujahid Aluminium	15 Persons
8	Shahrah e Qaideen	12:00 pm 03:00 pm	Qadri Hotel	09 Persons
9	Malir Halt	06-10-200 05:00 pm	Under Flyover	07 persons
10	Jail Road	06-10-2022 09:30 pm	Jail Road	04 persons
11	Nairan Cinema	06-10-2022 10:30 pm	Nairan Cinema	04 persons
12	4000 Road Korangi	07-10-2022 02:00 pm	Korangi	07 persons
Gender Consultation				

Sr. No.	Location	Date / Time	Venue	No of Participants
1	Jehangir Road	22-10-2022 12:30 pm	Basic Health Unit, Patel Para	06 Females
2	Godra	22-10-2022 03:30 pm	Godra, Buffer Zone	05 Females
3	Gulshan e Kaneez Fatima	22-10-2022 05;00 pm	Gulshan e Kaneez Fatima Society	19 Females

Meetings with Institutional Stakeholders

Sr. No.	Name of Department	Date / Time	Venue	Officials
1	KWSB	05-10-2022 01:00 pm	COD Plant	• Mr. Bhatti (KWSB) • Mr. Shahid (NESPAK) • Mr. Anneque (NESPAK) • Ms. Zeeshan (NESPAK) • Mr. Aftab (NESPAK)
2	KWSB	05-10-2022 03:00 pm	Clifton Pumping Station	• Mr. Raees (PIU) • Mr. Shahid (NESPAK) • Mr. Anneque (NESPAK) • Mr. Aftab (NESPAK)
3	K. Electric	10-10-2022 12:00 pm	K. Electric Office	• Mr. Yaseen Shaikh (Deputy Director Public Affairs) • Mr. Aftab (NESPAK)
4	Sindh Environmental Protection Agency (SEPA)_	10.10.2022 02:00 pm	SEPA	• Mr. Imran Sabir (Deputy Director Technical) • Ms. Kiran (PIU) • Mr. Aftab Ali (NESPAK)
5	CLICK, PIU-KWSSIP, EA Consultants	13.10.2022 02:00 pm	PIU-KWSSIP	• Mr. Mansoor (PIU) • Ms. Kiran (PIU) • Mr. Ali Hamid (NESPAK) • Mr. Farooq Laghari (PIU) • Mr. Zeeshan Jafry (NESPAK) • Mr. Abdul Manan (NESPAK) • Mr. M. Anns (NESPAK) • Mr. Fahad (CLICK) • Mr. Nabeel (EA)
6	Commissioner's Office	14.10.2022 12:00 pm	ADC Office	• Mr. Jawad Muzaffar (ADC-II) • Ms. Sara (Assistant Commissioner)

Sr. No.	Location	Date / Time	Venue	No of Participants
				• Ms. Kiran (PIU) • Mr. Ali Hamid (NESPAK) • Mr. Zeeshan (NESPAK)
7	Sui Southern Gas Company (SSGC)	22.10.2022 01:00 pm	Online meeting	• Mr. Khalil Khawaja (Chief Engineer bulk SSGC) Mr. Aftab (NESPAK)

The photolog of consultations at the proposed project sites is attached as **Annex - I**.

4.2 Findings of Consultation Meetings

The findings of public consultation meetings are summarized in **Table 4.2** and that with the government departments are summarized in **Table 4.3**.

Table 4. 2: Findings of Public Consultation Meetings

Sr. No.	Concerns	Responses
Katti Pahari (District Central)		
1	Water distribution network does not cover the entire area.	The current project focuses on the repair and rehabilitation of existing leakages on emergency basis. However, KWSB through KWSSIP is implementing various schemes for provision of water and improved sewerage network in different areas of the city.
2	The roads are unpaved.	The roads have been damaged due to leaking water from water and sewer lines. The roads will be paved only after the leakages have been repaired.
3	Municipal water is available only twice a month for a couple of hours only.	KWSB through KWSSIP is implementing various schemes for provision of safe water at the doorsteps.
4	Mixing of sewage and potable water in lines.	Once the leakages are repaired the mixing of water and sewage will be resolved.
5	All the sewer lines are old and punctured.	The old sewer lines are being repaired under the current project.
Korangi Flyover (District Korangi)		
1	There are sever traffic issues due to stagnant water and damaged roads.	The road patch work shall be done and hence the movement of traffic will be smoothened, furthermore, the leakages in water supply and sewer lines shall be repaired before road patch-work to ensure the protection of road.
2	Rickshaw drivers face travelling and parking issues due to stagnant water and damaged roads.	The movement issues shall be resolved after the execution of the project.

Sr. No.	Concerns	Responses
3	Domestic water is being contaminated due to mixing with the sewage.	The issue will be resolved after the execution of the current project.
4	The proposed activities should be executed immediately to resolve the current issues.	The current works are termed as 'Emergency Works' and will be executed and completed in shortest possible time.
Korangi Flyover - I. Area (District Korangi)		
1	Mosquitoes are all around due to stagnant water.	The leakages shall be repaired and no more water stagnation shall take place.
2	Commuters face problems in crossing the roads.	The mobility issues shall be resolved after the execution of project.
3	Roads have been damaged due to overflowing of potable water as well as sewage on the roads.	The roads are being repaired under a separate project named CLICK. Before construction of roads, the leakages in existing water supply and sewerage systems shall be repaired.
Mehran Depot Morr (District Malir)		
1	The leakages cause mixing of potable water and sewage.	The mixing of sewage with potable water shall be resolved after the execution of proposed project.
2	Government water supply is not present in the surrounding community.	KWSB through KWSSIP is implementing various schemes for provision of safe water at the doorsteps.
3	There are several diseases in the community due to consumption of contaminated water specially hepatitis.	The mixing of sewage with potable water shall be resolved after the execution of proposed project and the associated diseases shall also be avoided with this.
4	Manhole covers are missing in most of the streets.	Manhole covers shall be provided where they are missing and new covers with heavy weights shall be provided to ensure they do not get removed from there.
5	The commuters face accidents due to damaged roads and caused due to leakages.	The issue shall be resolved after the execution of the current project as well as CLICK project.
Shershah Chorangi (District Kemari)		
1	Wastage of water through bulk line.	The bulk line is being repaired under the current project.
2	Water stagnation on the roads.	The water stagnation issue shall be resolved due after the repair of lines.
3	Drinking water is being contaminated.	The contamination will be avoided after the repair of leakage.
4	Pedestrian movement issues due to water stagnation.	Pedestrian movement issues shall be resolved after the current project.
Nourus Chorangi (District Kemari)		
1	The business owners face loss of business due to stagnated water.	Water stagnation shall be resolved after the execution of current project and the access to existing business points shall be improved.

Sr. No.	Concerns	Responses
2	Solid waste is spread all over the roads.	The solid waste is being collected under a separate project of Government of Sindh.
3	The pressure in water supply lines is low due to leakages in the system	The pressure shall be improved after the repair of leakages in the system.
4	The leakages cause mixing of potable water and sewage.	The mixing of sewage with potable water shall be resolved after the execution of proposed project.
Shahrah e Qaideen – Qadri Hotel (District East)		
1	Water remains stagnated in the underpass.	The current project shall resolve the issue.
2	The sewers are damaged and chocked and hence cause overflowing.	The damaged sections of the sewerage system are being repaired under the current project.
Shahrah e Qaideen – Mujahid Aluminium (District East)		
1	Roads have been damaged due to overflowing of potable water as well as sewage on the roads.	The roads are being repaired under a separate project named CLICK. Before construction of roads, the leakages in existing water supply and sewerage systems shall be repaired.
2	Any work initiated in the city is left for many days and the contractors usually runs off.	The current project is being executed as 'Emergency Works' and the contractor shall be supervised and the activities shall be immediately completed.
Findings of Gender Meetings		
Jehangir Road		
1	Women suggested to inform about the alternate routes of access to their places before commencement of works.	The PIU with its Contractor shall conduct information disclosure sessions before commencement of the works and community will be informed about the alternate routes
2	Lady doctor of the community informed that due to leakage and overflow of manholes, it becomes difficult for them to reach the Basic Health Unit.	The issue will be resolved after the implementation of proposed works.
Godra - Buffer Zone		
1	Residents expressed their daily difficulties which they face because of sewerage issues.	The sewerage issues will be resolved after successful implementation of the project.
2	There are narrow roads and their access may get blocked in any construction work is executed.	No activities shall be undertaken within the narrow streets. The works will be done at the main roads and hence their access will not be affected.
Gulshan e Kaneez Fatima		
1	There are serious water and sewerage issues and females face daily issues in dealing with them.	The sewerage issues will be resolved after successful implementation of the project.
2	Children are facing multiple skin and water borne diseases.	The water borne diseases are usually due to contamination of potable water with

Sr. No.	Concerns	Responses
		leaking sewage which is being catered under the project.
3	The flood affected people have also migrated to this area which worsen the water and sewerage related issues.	The issue must be raised at higher forums so that government can make certain arrangements to cater such issues.

Table 4. 3: Findings of Meetings with Government Departments

Sr. No.	Department	Venue	Points of Discussion
1	SEPA	SEPA	• Discussion on the required instruments to be prepared for No Objection Certificate • SEPA demanded the description and cost of the projects to identify the instrument to be prepared for the project to get no objection certificate from SEPA • PIU shared the required information through formal channel • After examining the shared information of the project activities, SEPA will officially inform PIU about required instruments to get NOC.
2	K- Electric	K-Electric	• Brief of proposed activities was shared with K-Electric official and the project alignments were explained. • K-Electric sensitive spots were identified • Methods were discussed to protect the existing K-Electric facilities
3	KWSB	COD Filtration Plant	• Discussion on prevailing practices for repair of leakages. • Methods to adequately repair the damages without environmental pollution.
4	KWSB	Clifton Pumping Station	• Identification of the sites with critical problems causing environmental and health issues. • Methodologies to resolve the existing issues without creating social disturbances.

Sr. No.	Department	Venue	Points of Discussion
5	CLICK, PIU-KWSSIP	PIU-KWSSIP	• Identification of roads and patches where the project activities shall be implemented. • Agreement upon the sharing of data to conducted parallel activities for timely completion of the project.
6	SSGC	Online meeting	• SSGC committed to nominate focal persons from different divisions at their project sites who will verify the presence of SSGC installations and will supervise the contractor to protect them

5. SCREENING OF SUBPROJECT

5.1 Environmental and Social Screening

Environmental and Social Screening of the proposed subproject was carried out to categorize it based on perceived environmental and social impacts. The proposed subproject activities are minor in nature and their associated impacts are temporary, reversible and localized in nature.

The proposed project under KWSSIP-1 has a prior requirement of screening which is based on three categories; viz., nature of the project, size of the project and location of the project. Based on this assessment, potentially significant environmental and social issues are identified at an early stage for detailed environmental and social impacts assessment.

5.1.1 Methodology of Environment and Social Screening

Following methodology was adopted for environmental and social screening:

- Review of literature, policies and project related documents;
- Public consultations;
- Site visits
- Assessment of potential environmental and social impacts.

A. Environment and Social Issues

i. Environmental Issues

The proposed project will have limited, site-specific impacts reversible in nature. However, in this project, most of environmental impacts are expected during construction phase. Excavations shall be done for repair/ rehabilitation works. Due to excavation work, it is anticipated that health and safety of contractor's staff (labors) as well as of local community would be a serious concern. During construction, there would also be a slight increase in air pollution due to excavation. It is estimated that a portion of excavated material would be used as back filling and remaining excavated material would be disposed of at disposal site.

The proposed locations are mostly at the main roads which is the property of state. The construction activities may cause traffic disruption on the main roads as traffic volume on the roads varies from low to high during various hours of the day. However, the impact will be minor and limited and hence will not create major traffic issues.

There are no protected areas or threatened or endangered endemic species in the project area. However, churches, schools, mosques and basic medical facilities are present in abundance, which will not face direct impact due to construction activities of the project.

Presence of Eco-Sensitive Features/ Natural Habitats

No eco-sensitive features or natural habitats were identified in the project area.

Flooding

The project activities will not create flooding in the project area. Furthermore, the proposed activities are expected to be completed before the next monsoon.

Disruption to Traffic and Visitors

The project activities are minor interventions which are routine matters of KWSB and will have minor traffic issues in congested areas. Further, sites which may have traffic and severe social issues are not selected under this project. The project activities will create minor disruption for traffic hence a traffic management plan will be required to ensure smooth flow of traffic. A Traffic Management Plan is already given in **Figure 6.2**. However, the Construction Contractor shall prepare the site-specific plan in liaison with the traffic police/relevant authorities.

Noise and Dust

Noise and dust will be generated due to project activities and will require regular sprinkling of water. However, no sensitive receptors are present in close vicinity of the proposed project locations.

Health and Safety of Workers and Communities

The construction activities pose occupational and community health and safety (OCHS) risks. The OCHS issues are also associated with the operation of construction machinery and equipment, which may cause minor and severe injuries to workers. Accidental contact of workers with underground electrical cables during excavation will also be a major concern. It will be a long term and severe negative impact. The presence of poisonous H_2S gas in the existing sewer lines will also be a point of concern.

The community will also be exposed to accidental risks due to open trenches, electrical cables, construction machinery as well as dust and noise.

Impacts due to Existing Asbestos Cement Pipes

An additional, particularly acute health risk presented by this work derives from the fact that some parts of the existing water supply system (at Katti Pahari and Mukka Chorangi in district Central) include pipes of Asbestos Cement (AC), a material that can be carcinogenic if fibers are inhaled. There is therefore a significant health risk for workers and the public if these pipes are uncovered and damaged or cut accidentally, or deliberately to conduct the necessary pipeline refurbishment. This is in fact not such a major problem as might be expected, because:

- There is only a small length of AC pipes which will be replaced i.e., 10 feet at Katti Pahari and 300 feet at Mukka Chorangi;;
- These pipes are all in the old part of the city and their location is well known and marked on maps prepared by KWSB;

- The design of the project involves the replacement of these pipes with other material pipe and this can be done without removing or disturbing them, so all AC pipes will be left in situ.

ii. Social Issues

Availability of Land

The proposed subproject does not involve any land acquisition. The proposed subproject involves repair/ rehabilitation of existing bulk water lines, water supply distribution network and sewerage lines on the main roads, which are the properties of the state.

Impact on Livelihood

No adverse impacts on the livelihood are envisaged due to project activities. However, a few locations have been identified where the local business owner may face temporary loss of business due to restriction in access during execution of the project. Therefore, these locations have been excluded from the current emergency works. For these locations, separate E&S instruments will be prepared.

Positive impacts in terms of employment opportunities are anticipated as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction phase. Wider, flow-on economic impacts will be experienced in other sectors of economy as a result of purchase of construction materials and the payment of wages and salaries.

Women Harassment

Women may face harassment issues during construction due to labor influx. The impact is minor and low adverse in nature since the number of workers involved in the project are very low and the project locations are widespread.

Anti-Encroachment Drive (AED)

In accordance with the SMF of KWSSIP-1, no project works can be undertaken in areas that have been impacted by the AED. In compliance with this requirement, an AED related screening of the subproject was conducted. As per AED screening, no AED has been performed in the subproject area. No-objection certificate (NOC) have been obtained from the concerned Deputy Commissioner (DC) offices for this purpose. AED screening report is attached as Annex-XI.

Accessibility

The local community and the commuters may face temporary access issues during the rehabilitation works.

B. Findings of Environmental Screening

Summary of findings of Environmental Screening of proposed project are given in **Table 5.1.** Individual screening checklists are attached as **Annex – IX**.

Table 5.1: Findings of Environmental Screening

Screening Parameters	Bulk Water Lines		Water Supply Distribution Network		Sewerage System	
	Construction	Operation	Construction	Operation	Construction	Operation
Presence of Eco Sensitive Receptors	×	×	×	×	×	×
Clearance of Trees/ Vegetation	×	×	×	×	×	×
Water Pollution	×	×	×	×	×	×
Flooding	×	×	×	×	×	×
Soil Contamination	✓	×	✓	×	✓	✓
Noise & Dust	✓	×	✓	×	✓	×
Disruption to Traffic and Visitors	✓	×	✓	×	✓	×
Disturbance to Existing Infrastructure	✓	×	✓	×	✓	×
Health & Safety Issues	✓	×	✓	×	✓	✓

Legend:

✓ = Impact triggers due to project activities

× = Impact does not trigger due to project activities

All the aspects marked as '✓' may get triggered during the execution of the project, however, they will have very low significance and can be easily mitigated by adopting the basic mitigation measures. The contamination of soil may occur during concrete work, minor noise for limited time period will be generated, smaller quantities of dust will be generated during excavation works for the trenches, minor disruption to the localized traffic as well as minor health and safety issues including minor injuries may take place.

C. Categorization Based on Environmental Screening

The impacts identified during the screening process are envisaged to be minor, low adverse, and reversible in nature. The quantum of work and the related activities shall not create significant changes. Therefore, the project is categorized as Category C project as given in **Table 5.2.**

Table 5.2: Categorization Based on Environmental Screening

Project	Categorization	Further Studies Required
Repair/ Rehabilitation of leakages in water supply & sewerage system	C	None

D. Findings of Social Screening

Summary of findings of Social Screening of the project are given in **Table 5.3.**

Table 5.3: Initial Findings of Social Screening

Screening Parameters	Bulk Water Lines		Water Supply Distribution Network		Sewerage System	
	Construction	Operation	Construction	Construction	Operation	Operation
Land Acquisition	×	×	×	×	×	×
Loss of Shelter	×	×	×	×	×	×
Loss of Agriculture	×	×	×	×	×	×
Loss of crops, trees and fixed assets	×	×	×	×	×	×
Loss of Business/Livelihood (Temporary)	×	×	×	×	×	×
Loss of Business/Livelihood (Permanent)	×	×	×	×	×	×
Loss of Sources of Income	×	×	×	×	×	×
Dislocation of People	×	×	×	×	×	×
Disturbance to traffic	✓	×	✓	×	✓	×
Indigenous Peoples	×	×	×	×	×	×
Anti-Encroachment Drive	×	×	×	×	×	×
Labour influx	✓	×	✓	×	✓	×
Gender issues	✓	×	✓	×	✓	×
Community Health and Safety	✓	×	✓	×	✓	×

Legend:

✓ = Impact triggers due to project activities

× = Impact does not trigger due to project activities

E. Categorization Based on Social Screening

It is envisaged that the proposed project will pose minimal social impacts and no resettlement impacts. Therefore, the project is categorized as Category C project as given in **Table 5.4** based on the findings of social screening:

Table 5.4: Categorization Based on Social Screening

Project	Categorization	Further Studies Required
Repair/ Rehabilitation of leakages in water supply & sewerage system	C	None
Social/ Resettlement Screening Categorization: *Number of PAPs ≥ 200, Category A* *Number of PAPs < 200, Category B* *Number of PAPs = 0, Category C*		

6. ENVIRONMENTAL AND SOCIAL MITIGATION and MONITORING PLAN

To ensure environmental and social compliance with regulations and guidelines, a brief Environmental and Social Mitigation and Monitoring Plan has been prepared.

The objective of the Environmental and Social Mitigation and Monitoring Plan (ESMMP) is to ensure implementation of the proposed mitigation measures during design, construction and operational phases of the proposed Project. The ESMMP defines roles and responsibilities, reporting mechanism, training needs and schedules and budget to implement the ESMMP.

The current screening report shall be the part of bidding documents and its implementation will be the legal binding on the construction contractor (CC).

6.1 Implementation of ESMMP

The institutional arrangement for the implementation of ESMMP for the subproject is presented in **Figure 6.1**. The PIU-KWSSIP will be responsible for the compliance of environmental and social safeguard requirements of the KWSSIP.

The project activities will be monitored and managed by the PIU-KWSSIP. The Environmental and Social Cell (ESC) staffed by qualified environmental, social and gender specialist has already been established under PIU-KWSSIP. The Environmental & Social Cell (ESC) will be the custodian of the ESMMP. ESC will submit progress reports for the implementation of the ESMMP to WB and Sindh Environmental Protection Agency (SEPA) as per environmental approval/ NOC conditions for the KWSSIP.

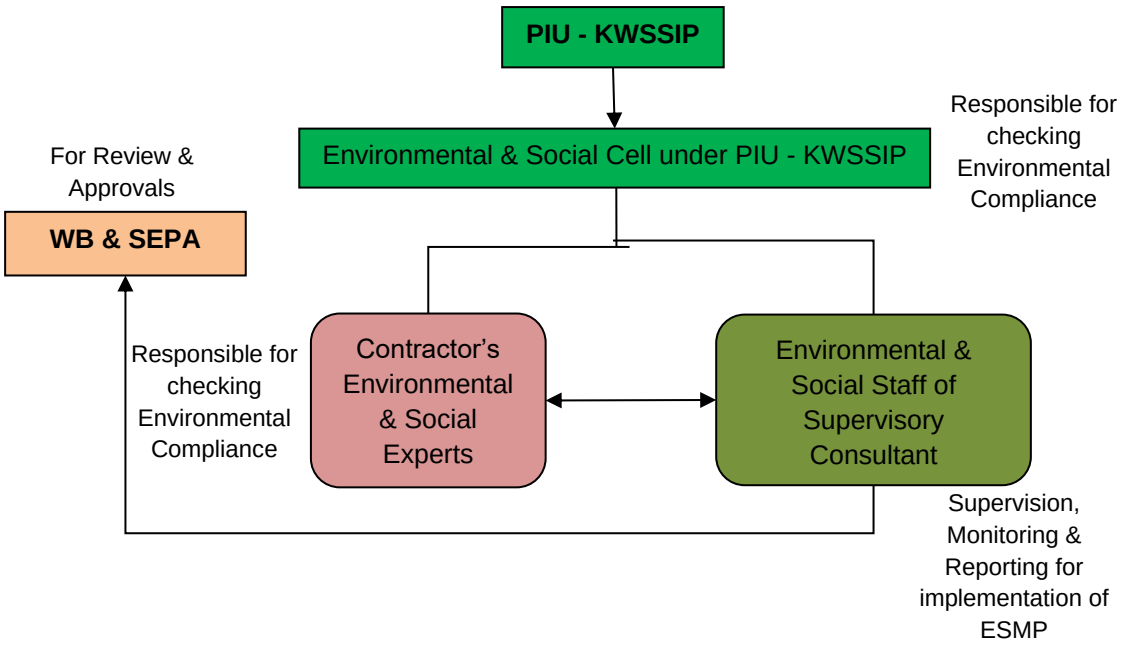


Figure 6. 1: Organizational Setup for implementation of ESMMP

6.1.1 Roles and Responsibilities of the Functionaries involved in ESMMP Implementation

A. SEPA

As per Sindh Environmental Protection Act, 2014, SEPA is responsible for the approval of the Environmental Assessment reports.

B. PIU-KWSSIP and ESC

The Project Director of PIU-KWSSIP is in-charge for the financial and technical matters related to KWSSIP project. The PIU responsibilities for monitoring the ESMMP will consist of:

- Ensuring that the required environmental, social and gender training are provided to the concerned PIU staff;
- To carrying out random visits to the construction sites to review the environmental and social performance of the Contractor;
- Review monitoring reports for the progress of environment and social management of the Project;
- Make sure that the Contractor is implementing the additional measures suggested by the Supervision Consultant (SC) in environmental and social monitoring reports;
- To assist Contractor for obtaining necessary approvals from the concerned departments;
- Maintaining interface with the other line departments/ stakeholders; and
- Reporting to the SEPA on status of ESMMP implementation.
- Make sure that all the contractual obligations related to the environmental and social compliance are met;
- Monitor the progress regarding implementation of environmental and social safeguards as provided in the ESMMP;
- Oversee the compliance of all the monitoring programs as given in ESMMP;
- Check randomly whether monitoring of the environmental aspects of the Project during construction and operational phases is being properly carried out;
- Document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports, and make follow-up on these actions to ensure progress toward the desired outcomes;
- Make sure that the Contractor implements the additional measures suggested by the monitoring and evaluation (M&E) Contractor; and
- Report the status of ESMMP compliance to Project Director, PIU-KWSSIP.

C. Supervision Consultant (SC)

Roles and responsibilities of SC will be:

- To oversee the performance of the Contractor to make sure that the Contractor is complying with ESMMP;
- Ensuring that the day-to-day construction activities are carried out in an environmentally

and socially sound and sustainable manner;
- Strong coordination with the Contractor and PIU-KWSSIP;
- Preparing E&S training materials and implementing programs;
- Ensure the implementation of the mitigation measures suggested in ESMMP;
- To supervise and monitor environmental and social activities being performed at site;
- To organize periodic environmental and social training programs and workshops for the consultant's and contractor's staff;
- Periodic reporting as mentioned in ESMMP; and
- Suggest any additional mitigation measures (if required).

D. Construction Contractor (CC)

The contractor will be primarily responsible for ensuring implementation of the mitigation measures proposed in the ESMMP, which will be part of the contract documents and its implementation will be a contractual binding for the contractors. The provision of the environmental and social mitigation cost will be made in the total cost of project. However, if the contractor fails to comply with the implementation of ESMMP and submission of the monthly compliance reports, deductions will be made from the payments to the Contractor claimed under the heads of environmental and social components.

Contractors will be bound to carry out following activities:

- Implementation of the mitigation measures as detailed in ESMMP at construction site;
- Contractor will be bound through contract to take actions against all the special and general provisions of the contract document;
- Contractor will make sure the compliance of ESMMP requirements related with construction;
- Implementation of OCHS control measures including provision of proper Personal Protective Equipment (PPE) to the workers and train them for their proper use;
- Compliance with international best SOPs for COVID 19;
- To conduct the environmental and health and safety training to the workers/labour; and
- To assess the site-specific issues and implement mitigation measures accordingly
- Provide harassment free and safe secure environment for the labor and community specially community women and children.

The contractor shall prepare a site specific ESMMP based on the current ESMMP and will get it approved from SC. This will ensure the implementation of the ESMMP based on the site conditions at the time of execution, by the contractor.

Table 6. 1: Environmental and Social Mitigation and Monitoring Plan

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
A: Design/ Pre-Construction Phase								
1.	Engineering Design	▪ Earthquake	▪ Seismic provisions in all engineering and structural design shall be ensure as per Seismic Building Code of Pakistan (2007). i.e., manholes, sewers bedding etc. will be designed with seismic provisions.	DC, PIU-KWSSIP	Design Parameters as defined by Seismic Building Code	Once (after completion of Detailed Design)	PIU	N/A
		▪ Incompatible layout plans	▪ All structural, layout and engineering design of the project are in strict accordance with the applicable national and international guidelines/ codes/ standards and engineering practices.	DC, PIU-KWSSIP	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
2.	Site Selection	▪ Resettlement issues of local people, disturbance to properties/ businesses	▪ Locations with no resettlement of the structures/ people/ businesses have been selected	DC, PIU-KWSSIP	Project site	Once (after completion of Detailed Design)	PIU	N/A
		There will be no tree cutting during construction phase	▪ No mitigation measures will be required.	DC, PIU-KWSSIP	Project site	Once (after completion of Detailed Design)	PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		▪ Vehicle and road accident	▪ Designing of traffic management plan. (See **Figure 6.2** below)	DC, PIU-KWSSIP	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
3.	Public and Cultural Properties	▪ Disturbance to people visiting public properties i.e., mosque, schools, shrines, and graveyards etc.	▪ Incorporate technical design features and manage work schedule to minimize the disturbance/ interference with cultural site and public property as far as possible	DC, PIU-KWSSIP	Project Site	Once (after completion of Detailed Design)	PIU	N/A
4.	Disturbance/ damage to existing infrastructure	▪ Possible disturbance to the public and existing infrastructure	▪ Incorporate technical design features to minimize effect on public utilities. ▪ All public utilities likely to be affected by the proposed project need to be relocated well ahead of the commencement of construction work.	DC, PIU-KWSSIP	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
				DC, PIU-KWSSIP	Relocation of utilities	Once (after completion of Detailed Design)	PIU	N/A
			▪					
B: Construction Phase								
1.	Site clearing	▪ Loss of vegetation may occur	▪ Ensure minimum disturbance to native flora during construction by remaining confined to the project area and	CC, SC and PIU-KWSSIP	Visual Observation	Twice a week	CC, SC & PIU	Cost of all these mitigation measures will be

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			taking due care in movement of machinery and storing of material.					included in the project estimate
		▪ Soil erosion	▪ Minimize the amount of clearing. Clear small areas for active work, one at a time.		Visual Observation	Twice a week	CC, SC & PIU	
			▪ Install temporary erosion control features when permanent ones will be delayed. Use erosion control measures such as hay bales, berms, straw, or fabric barriers.		Visual Observation	Twice a week	CC, SC & PIU	
2.	Establishment of construction camp/ tents	▪ Conflict due to use of private land for camp construction	▪ The centralized construction camp will not be required. However, tent facilities may be provided at open spaces away from residential areas to avoid conflicts with the community. ▪ . ▪ The contractor shall adopt environmental code of practices (ECOPs) as **Annex – II**	CC, SC and PIU-KWSSIP	Report of issue	Once (at the time of establishment of construction camps i.e., tents)	. CC, SC & PIU	N/A
		▪ Social conflicts due to influx of external workforce	▪ Labor tents will be established away from residential population; these tents will be non-residential		Report of issue	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			▪ Preference will be given to the local people to work with contractor; ▪ Awareness will be created among the work force to ensure respect for local customs; ▪ Construction work should be completed within the stipulated time to move workers to next location; ▪ Labor force should be shuffled with the time; ▪ An effective GRM has been established for the project to resolve all issues related to the community. Thus, progress regarding resolving the issues should be monitored closely. ▪ ; ▪ Provide adequate personal hygiene facilities in good condition with adequate supply of clean water; ▪ Make arrangements to treat the affected workers on time to control the movement of vectors disease;					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			▪ ; ▪ ; ▪ Strictly enforce the workers' code of conduct (sample attached as Annex- III) to regulate behavior in the local communities; ▪ Prohibiting drugs, alcohol, weapons, and ammunition on the worksite among personnel; ▪ ; ▪ Appropriate fencing, and security guards should be provided at the construction sites to ensure the security of all plant, equipment, machinery and materials, as well as to secure the safety of site staff; and ▪ The Contractor must guarantee that good relations are maintained with local communities and their leaders to help reduce the risk of vandalism and theft.					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		▪ Health issues in workers due to contaminated drinking water.	▪ Contractor shall ensure provision of safe drinking water to the workers.		Visual observation	Twice a week	CC, SC & PIU	
		▪						
3.	Excavation of Earth	▪ ▪ Air quality may deteriorate	▪ Excavation should be confined as per approved engineering drawings. ▪ Water sprinkling must be done to suppress the dust.	DC, Contractor	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
4.	Transportation of construction material	▪ Smoke and dust generation; ▪ Spillage of material; ▪ Air pollution ▪ Water pollution ▪ Noise pollution ▪ Occupational, Health and Safety issues	▪ Regular inspection, tuning and maintenance of transport vehicles; ▪ Material transport in closed vehicle or covered with canvas/ plastic sheets; ▪ Sprinkling of water on site and on routes near communities; ▪ Selection of up-to-date and well-tuned vehicles or equipment with reduced noise levels ensured by suitable in-	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			built damping techniques or appropriate muffling devices; ▪ Avoiding movement of vehicles at night near communities. ▪ Use of sign board at construction site; ▪ Use of PPE; give awareness to the drivers; Avoid over speeding near communities; Training of construction workers.					Cost of PPEs is already included in Table 6.6 & 6.7
5.	Construction Works	▪ Soil erosion and contamination ▪ Accident risks ▪ Loss of natural vegetation and associated fauna ▪ Damage to infrastructure ▪ Noise pollution ▪ Air pollution ▪ Land degradation; soil erosion; pooling of water and drainage problem ▪ Residual wastes;	▪ Proper compaction to minimize wind and water erosion; ▪ Machinery and equipment will not be repaired and maintained at the site; ▪ Usage of PPEs; ▪ Provision of first aid kits and emergency vehicle; ▪ Trained drivers will be hired to operate machinery safely; ▪ Availability of trained operator to operate machinery; ▪ Restoration/ rehabilitation of damaged infrastructure with entire satisfaction of the affected persons	▪ CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	Cost of PPEs and first aid kits is already included in Table 6.6 & 6.7

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		construction material waste	▪ Use of noise reduction devices; ▪ Regular inspection, maintenance and lubrication of the construction vehicle and equipment; ▪ Avoid night time activity. ▪ Water sprinkling particularly at work sites near the communities; ▪ Remove any left-over construction material/wastes from the construction sites; ▪ The contractor shall adopt environmental code of practices (ECOPs) as **Annex - II**					
6.	Community Health & Safety (CHS)	▪ Accident risks, particularly for local population living within/near the subproject especially women, children and elderly people; ▪ Deterioration of health due to dust.	▪ Preparation and implementation of CHS Management Plan ▪ Barricading work areas to avoid entry of any unauthorized person in the construction site ▪ Public awareness campaigns through displaying sign board at site and haulage routes; ▪ Interaction with community; ▪ Availability of first aid box for locals;	▪ CC, SC, PIU-KWSSIP	Visual observation & reporting of accident	Twice a week	CC, SC & PIU	Cost of first aid box is already included in Table 6.7

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			▪ Strict enforcement keeping non-working persons, particularly children, away from work sites by cordoning off the sites with the barricade ▪ Adequate signage to manage traffic at sites, haulage and access roads; ▪ Ensure water sprinkling. ▪ Maintain a complaint register on site and it must be communicated to the internal staff and the public. ▪ Close consultation with local communities to identify optimal solutions where needed ▪ Community grievances will be recorded and responded to on an urgent basis. ▪ No Hazardous and non-hazardous waste will be dumped outside any community.					
7.	Handling of solid waste	Solid waste may be generated from the active construction	▪ Training of site personnel in waste management, ▪ Recording system for the amount of waste	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		sites and also from the tent facilities	generated, recycled and disposed, ▪ Proper storage and site practices to minimize the potential for damage or contamination of construction material, ▪ General refuse should be stored in enclosed bins to separate from construction material, and ▪ Contractor shall safely remove the general refuse from the site. ▪ Damaged AC pipes should be left in situ without taking it out for disposal. The labor shall adopt safety measures, wear mask and use proper PPEs while working on replacement of AC pipes. ▪ The contractor shall adopt environmental code of practices (ECOPs) as **Annex –II.**					
8.	Excavation, cutting, and filling	▪ The excavated areas are a hazard to community and workers. ▪ The storing or	▪ Place fence around excavation; ▪ Have construction crews and supervisors be alert for buried historic, religious, and cultural	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		excavated material at site would add on to the access and traffic congestion issues. ▪ Soil erosion may occur at the site where excavation will be done ▪ Soil un-stability and surface water contamination may also occur.	objects and provide them with procedures to follow if such objects are discovered. Provide incentives for recovery of objects and disincentives for their destruction; and ▪ The Chance Find Procedure attached as **Annex-IV** shall be adopted if any physical cultural resource (PCR) is encountered during construction activities. ▪ Water sprinkling should be carried out at the temporary access road and all the areas prone to dust generation.					
9.	Traffic control/issues and accessibility	▪ Traffic jams and congestion may take place and cause inconvenience to the people where the construction of interchanges will take place ▪ The commuters may face minor accessibility	▪ The contractor will prepare site specific traffic management plan in consultation with traffic police/relevant authorities in the light of traffic diversion plan attached as **Figure 6.2** ▪ Provision of signboards directing the drivers about the diversion; ▪ Providing and maintaining traffic management	CC, SC and PIU-KWSSIP	Visual observation	Daily	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		issues during construction (however, the duration of works will be very limited and quantum of work will be low)	comprising diversion warning, guiding and regulatory signage, channelizes and delineators, lightening etc.; ▪ Movement of vehicles carrying construction material should be restricted; ▪ Availability of continuous services of the police in the diversion and control of traffic. ▪ Provision of adequate passages for mobility of the commuters where required					
10.	Occupational Health & Safety (OHS)	▪ Chances of contact with underground electrical cables during excavations; ▪ Chances of roadside accidents during construction; ▪ Slip and fall hazard of construction workers	▪ Preparation and implementation of OHS Management Plan ▪ Regular OHS training ▪ Obtain as built drawings of existing infrastructure from concerned departments and plan accordingly Ensure prior shifting/ relocation of existing amenities; ▪ Barricade excavated sites; ▪ Provision of PPEs to workers including H_2S	CC, SC and PIU-KWSSIP	Visual observation & reporting of accident	Twice a week	CC, SC & PIU	Cost of PPEs is included in

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		▪ Risks associated with working in confined spaces ▪ Exposure to H_2S gas	mask kits while working with old sewer lines; ▪ Implementation of HSE protocols at site; ▪ The labor having transmittable diseases should not be allowed on the construction site; ▪ The contractor will ensure and strictly implement the SOPs regarding COVID- 19 (see **Annex – V**), including daily body temperature check, daily disinfection, quarantine management, area access management, PPE, emergency response, and drills; ▪ The proposed area is congested, there should be sufficient signage to warn of dangers and hazards on a construction or worksite. Signs should be clear and accompanied by ropes, cones, and other equipment to cordon off dangerous areas. ▪ Conduct worksite inspections daily to identify any potential					Table 6.6 & 6.7

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			dangers or hazards. Dangers and hazards should be cordoned off immediately. Properly cordon off the construction area and unauthorized entry should not be allowed, please. ▪ Only skilled workers will be allowed to work at the construction site; ▪ Provision of first aid facilities for workers at site for meeting the emergency needs of workers, and providing basic medical training to specified work staff and basic medical service and supplies to workers; ▪ Observe and maintain standards of Health and Safety towards all employees in line with WB EHS Guidelines along with Sindh Occupational Health and Safety Law ▪ The contractor will follow Environmental Code of Practice (ECOPs) attached as **Annex – II**.					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			▪ The contractor will ensure that hazards associated with manual lifting are controlled by proper lifting techniques, Work rotation system will reduce the chances of being exposed to work- related stress associated with construction activities. ▪ Unauthorized personnel will not be allowed to access the proposed project site without permission and safety permits. ▪ Workers should be facilitated by providing appropriate work specific personal protective equipment (PPE's). ▪ Health and Safety Management Plan attached as **Annex – VI** must be adopted**.**					
11.	Labor Living and Working Conditions	▪ Provision of inadequate facilities to labour and workforce may arise grievances	▪ The worker's Grievance redressal mechanism must be developed and communicated among workers to lodge complains;	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		among them. ▪ Issues related to labor influx ▪ Gender Based Violence (GBV)	▪ Workers should be provided with clean drinking water and hygienic food for free; ▪ Avoiding Gender Based Violence. Contractor will prepare and implement robust measures to address the risk of gender-based violence that include (i) mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women; (ii) informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted; (iii) Introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for noncompliance (e.g., termination), and (iv) contractors adopting a policy to cooperate with					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			law enforcement agencies in investigating complaints about gender based violence. ▪ The contractor shall pay equal wages to both male and female workers; ▪ Use of child and forced labor will be strictly prohibited.; ▪ The Contractor will adopt gender sensitive and GBV free code of conduct during the construction ▪ Implement the Labor Management Plan (LMP) that has been prepared for KWSSIP-1. ▪ The contractor shall adopt environmental code of practices (ECOPs) as **Annex – II.**					
		▪	▪					
13.	Site Restoration	▪ The excavated sites may not be restored to original	▪ Contractor will obtain approval for excavation and submit the plan of rehabilitating the site after construction. ▪ Site restoration will be completed immediately	CC, SC and PIU-KWSSIP	Visual observation	Once (after completion of construction activities)	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			after completion of the project.					
14.	Construction activities	▪ Labor issues	• The worker's Grievance redress mechanism will be developed and communicated among workers to lodge complains; • Workers will be provided with clean drinking water and hygienic food and safe & healthy environment to work. • Project workers will be paid on a regular basis as required by national law and labor management procedures such as Sindh Minimum Wages Act and Sindh Payment of Wages Act 2015. • Where required by national law or the labor management procedures, project workers will receive written notice of termination of employment and details of severance payments in a timely manner.	CC, SC and PIU-KWSSIP	Visual inspection GRM Register Employment Documents of Workers	During construction phase of the project (Weekly basis)	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			• A child under the minimum age established in accordance with Employment of Child Act (1991) and no child will be employed or engaged in connection with the project. • Use of child and forced labor will be strictly prohibited.					
15.	Replacement of Asbestos Pipes	▪ OHS and CHS issues due to release of fibrous material from cutting of existing AC pipes	• Training of all personnel (including manual laborers) to enable them to understand the dangers of AC pipes and to be able to recognize them in situ; • Application of HSMP to protect both workers and citizens; • Usage of appropriate breathing apparatus and protective equipment by persons delegated to deal with the AC material; • All the AC pipes will be left in situ and will not be transferred with the other waste materials					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
16.	Gender Based Violence (GBV)	▪ Possible gender related issues due to construction activities	• Workers' code of conduct (CoC) (attached as Annex – III) shall be strictly implemented • Contractor must ensure that workers should not be allowed to accumulate or gather in the residential communities within the site. • Alternative routes/ pathways for pedestrian should be provided to avoid mixing of women with workers. • Raise awareness among the stakeholders specifically the resident communities and the labor of the potential risks of GBV, and establish response services in the nearby communities that can respond to instances of GBV (particularly those related to issues of labor inflow). • Provisions of gender disaggregated bathing, changing, and sanitation facilities; and Contractor should take proper	CC, SC and PIU-KWSSIP	Visual inspection GRM Register	During construction phase of the project (Weekly basis)	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			measures to address and resolve issues relating to harassment, intimidation, and exploitation, especially in relation to women. • Develop and implement proper Labor Management Plan including a code of conduct for workers providing guidance on allowable behavior. • Preference will be given to the local people to work with contractor, and contractor should hire maximum labor force from the project area, this will reduce the labor inflow. • Awareness will be created among the work force to ensure respect for local customs, norms and traditions. • Construction work will be completed in stipulated period of time.					
C: Operational Phase								
1.	Maintenance & Repair	▪ Deterioration/ wear & tear would be	▪ Routine checks shall be done by the field staff for any leakages in water	KWSB	Visual observation	Periodically	KWSB	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		caused with the passage of time that requires regular maintenance	and sewerage line and immediate actions shall be taken to rectify them.					
2.	Occupational Health & safety (OHS)	▪ Workers dealing with the operation and maintenance of sewerage lines may face health issues due to contact with waste water as well as exposure of H_2S gas.	Workers shall be provided with PPEs during routine O&M operations. ▪ Trainings shall be conducted for the work practices and use of equipment	KWSB	Report of accident	Occasional	KWSB	
3	Community Health & Safety (CHS)	▪ Minor issues to local community during maintenance works.	▪ The sites must be properly barricaded to avoid CHS issues during maintenance works	KWSB	Visual observation	During maintenance	KWSB	
4	Traffic Issues	▪ Minor traffic issues may arise during maintenance	▪ Diversion of traffic using diversion cones and barricade the sites	KWSB	Visual observation	During maintenance	KWSB	

Legend:

DC	Design Consultant	SC	Supervision Consultant
CC	Construction Contractor	PIU	Project Implementation Unit
KWSB	Karachi Water and Sewerage Board		

6.2 Monitoring

The overall objectives of the monitoring activities are to:

- Ensure regulatory requirements are met;
- Check that impacts do not exceed project standards and other environmental standards;
- Verify that mitigation measures are effective and implemented in the manner described in **Table 6.1**;
- Provide early warning of potential environmental impacts; and
- Inform future operations and contribute to continuous improvement in the management of environmental and social issues related to the project.

6.2.1 Monitoring Approach

Monitoring will be carried out by the Supervision Consultants (SC) and Project Implementation Unit (PIU), and its contractors pursuant to their contractual obligations to undertake inspections, monitoring and reporting. The following four types of inspections and monitoring will be employed.

- **Inspections** planned and conducted on a regular basis to ensure that mitigation measures and commitments are properly maintained and implemented, and that specific management procedures are being following (e.g., practices on waste storage and disposal).
- **Receptor monitoring** undertaken to verify predictions made in the screening report and to confirm that the activities at the site are not resulting in an unacceptable deterioration in the quality of habitats or infrastructure (e.g., monitoring disturbance to affected residents through a grievance mechanism).
- **Compliance monitoring** involving periodic sampling or continuous recording of specific environmental quality indicators or discharge levels to ensure compliance of discharges and emissions with project standards (e.g. produced water discharges and air emissions).

The frequency of inspections, monitoring and audits and subsequent reporting will be based on the project risks. The outputs will be used in the following ways.

- To provide early warning for site management and to adjust mitigation measures on a day-to-day basis to cater evolving conditions.
- To enable contractors to demonstrate that mitigation measures and procedures laid down in mitigation plans are being followed and operations are being conducted within compliance limits.
- To provide formal assurance to PIU that the project is compliant with regulations and agreed limits and that relevant mitigation / enhancement measures are being adhered to.

The monitoring checklist is attached as **Annex – VII**.

6.3 Reporting

The contractor shall prepare and submit monitoring reports for compliance of implementation to supervision consultant environmental team. The distribution of periodic reports is given in **Table 6.2.**

Table 6. 2: Distribution of Periodic Reports

Report	Prepared by	Reviewed by	Distribution
Start of the Project	Contractor	Reviewed by PIU-Environmental, Social & Gender Unit; KWSSIP	The Engineer and Project Implementation Unit
End of the Project	Contractor	Reviewed by PIU-KWSSIP-Environmental Social & Gender Unit; KWSSIP	The Engineer, Project Implementation Unit and The World Bank

6.4 Grievance Redress Mechanism (GRM)

This section outlines the policy and procedure for documenting, addressing, responding and employing methods to resolve project grievances and complaints that may be raised by the project affectees or community members arising from environmental and social performance, the engagement process, resettlement and/or unanticipated environmental or social impacts resulting from project activities that are performed and/or undertaken by PIU. The Section describes the scope and procedural steps and specifies roles and responsibilities of the parties involved. The purpose of the Grievance Redress Committee (GRM) is to receive, review and resolve grievances from project affectees or community members and ensure smooth and fair implementation of subproject activities. The Grievance Redress Committee (GRC) and Gender Based Violence Committee (GBV) has been established in PIU-KWSSIP through a notification attached as **Annex-VIII.**

6.4.1 GRM Principles

A GRM is established to address any complaints or grievances arising during the implementation period of the projects. People of the project area may perceive risks to themselves or their property or their legal rights or have concerns about the possible adverse environmental and social impact that a project may have. Any concerns or grievances will be addressed quickly and transparently, and without retribution to the project affectees or community members or complainant.

The primary principle of GRM is that all complaints or grievances are resolved as quickly as possible in a fair and transparent manner. All minor complaints regarding E&S issues, land or property issues or business/livelihood losses will be addressed immediately at community level Grievance Redress Committee (GRC) through involvement of project affectees and community members. In case the grievances cannot be resolved at the community GRC, the project affectees or community members may make a complaint to the project GRC and afterward at PIU-GRC, the details of which are provided under sub-

sections. The focus of the GRM is to resolve issues in a customarily appropriate fashion and record details of the complaint, the complainant and the resolution.

6.4.2 Objectives

The objectives of the GRM are to:

- develop an organizational framework to address and resolve the grievances of individual(s) or community(s), fairly and equitably;
- provide enhanced level of satisfaction to the aggrieved;
- provide easy accessibility to the aggrieved/affected individual or community for immediate grievance redress;
- ensure that the targeted communities and individuals are treated fairly at all times;
- identify systemic flaws in the operational functions of the project and suggest corrective measures; and
- ensure that the operation of the project is in line with its conception and transparently to achieve the goals for sustainability of the project.

6.4.3 Type of Complaints

The major complaints that may arise during the execution of the proposed project at site include but not limited to:

- Resettlement issues including loss of livelihood;
- Issues related to compensation of resettlement impacts;
- Environment and social issues (dust, noise, air pollution, social and cultural issues);
- Damage and blockage of public utilities;
- Traffic inconvenience; and
- GBV and harassment.

6.4.4 Disclosure of GRM

The GRM shall be disclosed at PIU-KWSSIP, KWSB head offices, and concerned Executive Engineer (XEN) and Superintendent Engineer (SE) offices, KWSSIP website as well as on project sites.

6.4.5 Structure of Grievance Redress Mechanism

The project will establish a three-tier GRM comprising Community GRC, project GRC; and PIU-GRC. These tiers are described below.

A. Community GRC (Tier-1)

The community-GRC will provide a platform for project affectees or community members to raise and discuss their concerns, resolve the E&S issues at the community level and coordinate with project management to communicate these E&S issues and concerns.

Community-GRC will be established to maintain a close rapport and coordination with affected persons and community members throughout the project implementation. The Social Development Specialist (SDS) of PIU will facilitate for the establishment of community-GRC that is representative of the ethno-cultural and gender diversity within the community. The community-GRC will comprise the following six members with one as the committee convener:

- Three female members (from the project affectees or community members); and
- Three male members (from project affectees or community members).

The project E&S and engineering staff will coordinate with community-GRC to review and resolve the E&S issue or concern related to resettlement planning or implementation as well as environmental and social concerns preferably within five (05) working days from receipt of the grievance. Any complaints that cannot be resolved at community-GRC will be forwarded to the next tier.

B. Project GRC (Tier-2)

Project will constitute a GRC headed by concerned Project Manager (PM) to resolve all grievances and complaints of the project affectees or community members. Project GRC will comprise of the following members:

- Project Manager (PM), as head/convener of project GRC;
- Environment, SDS and Gender specialists of PIU;
- E&S specialists of Supervision Consultant (SC)
- Resident Engineer of supervision consultant;
- A representative (E&S specialist) of contractor will act as focal point; and
- A representative of local community.

Note: Representative from any other district government department may be called as and when required by the project GRC. Environmental Specialist of PIU and SC will join project GRC meeting related to environmental issues only.

Project GRC will meet once a month and when the need arises. The project GRC will review grievances involving all E&S issues that may arise due to project implementation. Project GRC will perform following functions:

- Record, categorize and prioritize the grievances that need to be resolved by the committee and resolve them within ten (10) working days;
- Invite and hear aggrieved persons/parties to produce evidence of their claims and record their view point;
- Communicate its decisions and recommendations on all resolved issues to project executors and the aggrieved persons for smooth implementation;
- Forward the unresolved cases/ complaints to PIU-GRC within an appropriate time frame with reasons recorded and its recommendations;
- Develop an information dissemination system and acknowledge the aggrieved persons/parties about the development regarding their grievance;

- Maintain a complaint register accessible to the project affectees or community members with brief information about complaints and project GRC decision with status report; and,
- Maintain complete record of all complaints received by the project GRC with actions taken.

Any complaint that cannot be resolved by the project GRC, will be forwarded to the next tier – the PIU-GRC.

C. PIU-GRC (Tier-3)

At the third tier, the PIU has constituted a GRC (PIU-GRC). The committee has the following composition:

- Project Director KWSSIP, (Chairman of PIU-GRC);
- SDS, Member
- Gender Specialist, Member;
- Concerned Project Manager – PIU, Member;
- SDS of SC, Member; and
- Representative of Civil Society.

Note: Representative from any other district government department may be called as and when required by the PIU-GRC. Environmental Specialist of PIU and SC will join PIU-GRC meeting related to environmental issues only.

The PIU-GRC through authorized representative, will acknowledge the complainant about his/her complaint, scrutinize the record, investigate the remedies available and request the complainant to produce any record in favour of his/her claim. After thorough review and scrutiny of the available record on the complaint, field visit will be conducted to collect additional information, if required. Once the investigations are completed, the PIU-GRC will give decision within twenty (20) working days of receipt of the complaint. If the complainant is still dissatisfied with the decision, he/she can go to the court of law, if he/she wishes so. Organization of the GRM is shown in **Figure 5.1.**

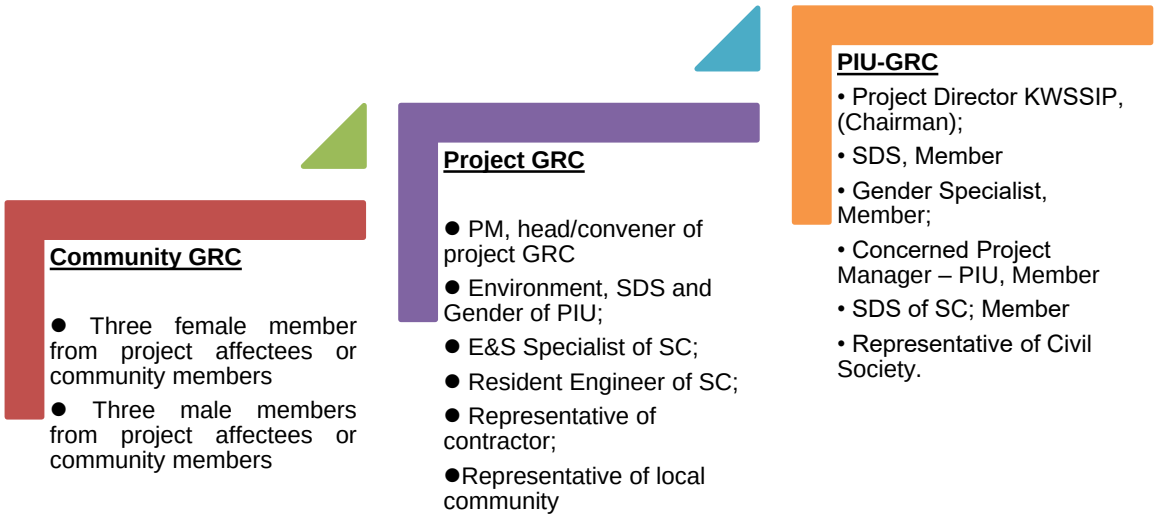


Figure 5.1: Organogram for GRM

Gender representation will be ensured by inducting a female member in all GRCs. The mechanism will ensure the access of project affectees or community members to a GRM that openly and transparently deals with the grievances and makes decision in consultation with all concerned that are consistent with the WB requirements.

D. Gender Based Violence (GBV) Committee

Besides PIU-GRC, GBV committee has also been established and notified consisting of the following members;

- Concerned Project Manager, Head/ Convener of GBV Committee
- Gender Expert KWSSIP, Secretary
- SDP KWSSIP, Member

GBV Committee will address the gender related issues due to project activities during implementation.

6.4.6 Grievance Redress Procedure

The intention of GRM is to resolve a complaint as quickly and at as low a level as possible to avoid a minor issue becoming a significant grievance. Irrespective of the stage of the process, a complainant has the option to pursue the grievance through the court as is his/her legal right in accordance with law.

The GRCs will work at site, project and PIU levels. The E&S and engineering staff of PIU, in coordination with site staff will inform the project affectees and community members about the GRCs and its mechanism through consultations and by posting at prominent places. The complaints received through any media will be screened by type & category and registered in Community Complaints Register (CCR), where the name and address of complainant, date, description of complaint and action taken will be recorded. The Following procedure will be considered to redress the grievances:

- First, complaint resolution will be attempted to be addressed at community-GRC through the involvement of the field E&S/engineering staff. The community-GRC shall give decision within 05 working days of receipt of the complaint. If unsettled, grievance can be lodged to the project GRC by the complainant to proceed under law and communicate decision in least possible time.
- Project GRC will acknowledge the receipt within 02 working days of lodging of complaint. Initial review and consultation with the project GRC will be conducted within 05 working days of receipt of complaint. If required, project GRC will advise the E&S/engineering specialists to conduct field visits in consultation with the aggrieved persons/parties and local community and submit a fact-finding report. Preferably, the fact finding will be completed within 08 working days from receipt of complaints. Subproject GRC shall give decision within 10 working days of receipt of the complaint. If unresolved, a grievance will be lodged to the (PIU-GRC) by the complainant.
- The PIU-GRC shall give decision within 20 working days of receipt of the complaint. If the complainant is still not satisfied, he/she can pursue further by submitting to the appropriate court of law.

All the E&S issues will be dealt according to the above GRM procedures. GRC will clarify the legal course of action and guide aggrieved persons/parties to approach appropriate legal forum. The GRCs will hear and clarify with the complainant (if required so) about the E&S issue and shall conclude and communicate its recommendations for further implementation in due course of time. Complainant will be kept informed during the process and the GRC decision will be communicated accordingly. In case of any delay, the complainants will be informed on the progress and process about their grievances. The GRC proceedings will be documented step by step and all records will be maintained and summarized in the project progress and internal monitoring reports.

6.4.7 Lodging of Complaint

The complainant(s) can lodge their grievances by online, mail, phone, WhatsApp, e-mail and complaint box. Moreover, PIU has established E-Portal for filing and tracking progress of the application online the detail has been provided below:

- An electronic complaint lodging system (application) that will be accessible through a link on the PIU KWSSIP website;
- The focus of the e-portal is the quick complaint lodging for all types of primary stakeholders;
- Any project affectee or community member with internet access can lodge a complaint with option for anonymous complaints. Uploading of photos for better understanding of the problem will also be an option;
- Each complainant will get a unique Grievance Number to track their complaints through the e-portal;
- Each complaint will go through a quick resolution mechanism being managed by a dedicated team at the PIU. Each complainant will be contacted to ensure that his/her issue is resolved;

- The portal will differentiate between types of complaints for targeted decision-making and action on behalf of PIU; and
- The portal will allow a quick and easy method for monitoring of the entire complaint lodging and resolution mechanism.

Direct workers' GRM structure: To mitigate the risks related to direct workers a GRM for Direct Workers will be established. GRM structure for KWSSIP:

- **First level.** The Project Coordinator/Human Resources of PIU-KWSSIP depending on the nature of the issue raised will be responsible to receive, consider and address in a timely manner the grievances, including the concerns on unaccounted working hours and lack of compensation for overtime, delay in/nonpayment of salaries. If the issue cannot be resolved at the first level within 7 working days, then it will be escalated to the next level.

- **Second level.** The Project Director of KWSSIP is a second-level GRM for direct workers if there is a situation in which there is no response from HR or if the response is not satisfactory then complainants and feedback providers have the option to appeal directly to the Project Director to follow up on the issue. The complaints should be considered and feedback provided within the next 7 working days.

Contracted worker's GM structure: To mitigate the risks related to direct workers a GM for Contracted Workers will also be established:

- **Contractor's level.** Contractors should develop their own GRM and resolve the grievances of contracted workers. Grievance Focal Point (GFP) assigned by the Contractor will file the grievances and appeals of contracted workers and will be responsible to facilitate addressing the grievances. If the issue cannot be resolved at the contractor's level within 7 working days, then it will be escalated to the PIU of the KWSSIP local level.

- **Local level.** The Social Specialist of PIU local level in Karachi will serve as Grievance Focal Point (GFP) to file the grievances and appeals of the project workers. He/She will be responsible to coordinate with relevant departments/organizations and persons to facilitate addressing these grievances. If the issue cannot be resolved at the PIU level within 7 working days, then it will be escalated to the Agency level.

- **Central level:** If there is a situation in which there is no response from the PIU Local level, or if the response is not satisfactory then complainants and feedback providers have the option to contact the Project Director of KWSSIP or Focal Person in KWSB Central Office directly to follow up on the issue.

6.5 Training Program

The primary responsibility of providing the E&S trainings to all project personnel will be that of the contractor and ESC. The trainings will be provided to different professional groups separately such as managers, skilled personnel, unskilled labors etc. Capacity building will be aimed at strengthening the ESC, and operational staff in the field of

environmental management, social and gender development. **Table 6.3** provides detail of trainings required for implementation of ESMMP during construction and operational phase.

Table 6. 3 Training Program

Environment code of practices/ Gender Aspects	Awareness & applicability of environmental code of practices/ Awareness on gender inequalities/GBV OP 4.20	02 Nos.	200,000
Awareness workshop regarding Covid 19 and other vector borne diseases	Risk, Prevention and available treatment	02 Nos	200,000
Waste Management	Awareness associated with waste Storage, collection and safe disposal	02 Nos	200,000
Community/ occupational health and safety	Awareness on EHS Guidelines	02 Nos	300,000
		Total	900,000

6.6 Capacity Building & Institutional Strengthening

In order to ensure that the ESMMP provisions are implemented efficiently and effectively, capacity building/ strengthening of the implementing parties are required. Therefore, based on the assessment of the institutional capacities of the parties involved in the implementation of the ESMMP, the following broad areas of capacity building/ strengthening have been identified and recommended for effective implementation of the ESMMP.

Table 6.4 shows the positions proposed for institutional strengthening for an effective implementation of environmental and social mitigation measures along with their responsibilities while **Table 6.4** presents cost of institutional strengthening.

Table 6. 4: Institutional Strengthening

Institutional strengthening	Position	Scheduling (Months)	Responsibility
Contractor	Environmental/ HSE Expert	06	▪ Complete understanding of WB, local and federal environmental regulations. ▪ Implement environmental guidelines and practices. ▪ Review and recommend improvements to existing environmental programs for compliance assurance. ▪ Generate environmental reports as requested by regulatory agencies. ▪ Provide guidance and direction to management for ensuring environmental compliance. ▪ Prepare permit applications and agreements as needed by regulatory agencies. ▪ Obtain, maintain, modify and renew environmental permits and licenses. ▪ Work with emergency response team to address environmental incidents such as chemical leaks and spills. ▪ Identify and solve environmental violations. ▪ Conduct regular environmental inspections to determine pollution level. ▪ Investigate environmental accidents and propose corrective actions. ▪ Educate workers on environmental health and safety procedures.

Institutional strengthening	Position	Scheduling (Months)	Responsibility
	Social/ Resettlement / Gender Expert	06	▪ Collect baseline social data to assess the social impacts associated ▪ Conduct and document surveys, group discussions and interviews with stakeholders and local people. ▪ Identify social negative impacts and benefits likely to result from the construction and operation of the project. ▪ Provide input into the feasibility design of the project based on the preferred option, proposing measures to minimize social impacts during construction and operation. Propose measures to mitigate negative impacts. ▪ Analyze country's gender policies ▪ Provide advice and support to on gender issues. ▪ . ▪ Participate in meetings with the client, project team and other key stakeholders ▪

Table 6. 5: Cost of Institutional Strengthening

Sr. No.	Position	Scheduling (Months)	Unit Cost (Rs.)	Cost Estimates (PKR)
A. Construction Phase – 02 months (for contractor)				
1	Environmental Expert/ HSE Expert (03 Numbers)	04	250,000	3,000,000
2	Social / Resettlement/ Gender Expert (03 Numbers)	04	250,000	3,000,000
			Total Cost	**6,000,000**

6.7 Environmental Budget

6.7.1 Health and Safety Cost

Cost of Health and Safety during construction phase is worked out as **Table 6.6 & Table 6.7** below.

Table 6. 6: Health and Safety Cost during Construction Phase

Sr. No.	Description	Quantity	Unit	Rate (PKR)	Amount (PKR)
1	Medical screening for workers (COVID, HIV, and others etc.)	220	Persons	5000	1100000
2	Tarpaulins	22	Each	30,000	660000
3	Handling of hazardous material	4	Per Month	10,000	40000
4	Handling of solid waste	4	Per Month	50,000	200000
5	DCP Fire extinguishers in case of fire	22	Each	3,500	77000
	CO2 Fire extinguishers in case of fire	2	Each	10,000	20000
	Fire alarm (one for each site)	22	Each	10,000	220000
6	Special Measures for Covid-19		L.S.		1,000,000
7	Cost of Personal Protective Equipment (PPE)* (Breakup given on separate sheet)	-	-	-	2,086,000
			Total Cost		**5,603,000**

Details of PPE cost is given below in **Table 6.7.**

Table 6. 7: Break-up for PPEs Cost during Construction Phase

Item No.	Description	Quantity	Unit	Rate (PKR)	Amount
					PKR
1	Ear plugs	440	Each	100	44,000
2	Helmets	220	Each	1500	330,000
3	Safety shoes	220	Each	3000	660,000
4	Protective goggles	220	Each	2000	440,000
5	Gloves	440	Each	300	132,000
6	H_2S Mask & Kit	10	Each	15000	150,000
7	Dust Mask	1,760	Each	100	176,000
8	Face Shield	22	Each	2000	44,000
9	First Aid Kit	22	Each	5000	110,000
				Total	**2,086,000**

6.7.2 Summary of Cost

The total estimated cost for the implementation of construction stage activities given in this screening report will be included within the civil works contract for this project with total cost of **Rs. 10,200,000** PKR.

i.	HSE Cost	=	5,603,000 /-
ii.	Training Cost	=	900,000/-
iii.	Institutional Strengthening	=	6,000,000/-
	Total Cost	**=**	**12,503,000/-**

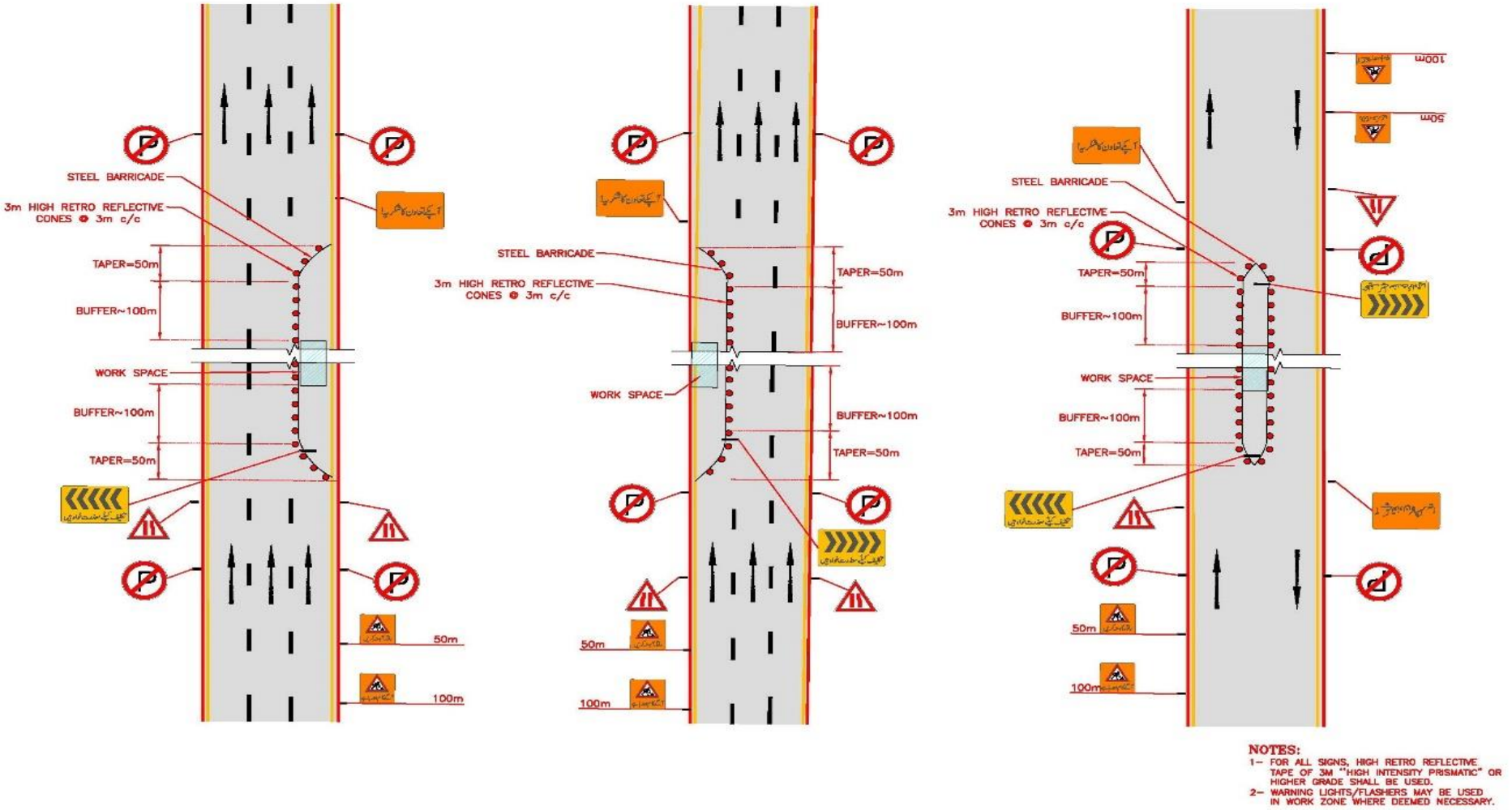


Figure 6. 2: Traffic Diversion Plan

Annex – I

Photolog of Public Consultations & Performas

Photolog of Consultations


Consultation Meeting with Rickshaw Drivers under Korangi Flyover, District Korangi


Consultation Meeting at I-Area, District Korangi


Consultation Meeting at Katti Pahari, District Central

Consultation Meeting at Naurus Chorangi, District Keamari

Consultation Meeting at Shershah Chorangi, District Keamari

Consultation Meeting at Shahrah e Quaideen

Consultation Meeting at Shahrah e Quaideen


Consultation Meeting at Industrial Area, District Korangi


Consultation Meeting at Malir Halt




Consultation Meeting at Haji Rahim Khan Village






Gender Consultation Meeting in Different Districts

Individual Consultation Meetings in District Central

Individual Consultation Meetings in District Central

Individual Consultation Meetings in District Malir

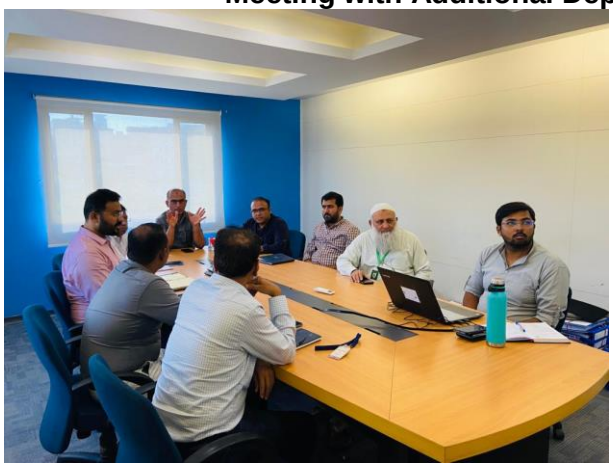
Individual Consultation Meetings in District Korangi

Consultation with Government Departments

Meeting at COD Plant

Meeting at Clifton Pumping Station

Meeting with Additional Deputy Commissioner-II, Karachi



Consultation Meeting with K-Electric

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GOVERNMENT OF SINDH

KARACHI WATER AND SEWERAGE BOARD (KWSB)

PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 13/10/2022

Name of Facilitator: _____ Location: Katti Pahari

Venue: نیو کٹی پہاڑی ملنگ جاوید ریسٹو رینٹ

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

(1) Water distribution does not cover the entire area
(2) Roads are broken
(3) Water after 18-20 days (For 2 hours only).
(4) Mixing of sewage & DW
(5) Old sewer lines & over flowing sewage
(6) No AED
(7) Mostly labours & Majority is Pakhtoons

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	Noman Akbar	0310-2643782	Noman
2	Fahad Khatak	0332-3100053	
3	Adil Shah		
4	Munawar Seith		
5	Umair Khattak	0343-1375720	Umair
6	Rehmat		Rehmat
7	Umair		
8	Gulistan		
9	Aqeel Noor		
10	Taffir		
11	Rafique		Rafique
12	Bilal		
13	Ali		
14	Laeeq Khan		
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KARACHI WATER AND SEWERAGE BOARD (KWSB)

PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 14/10/2022

Name of Facilitator: _____ Location: Korangi Flyover

Venue: _____

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

① Traffic block issues.
② Rickshaw adda parking issues (Go rickshaws)
③ Movement of rickshaw issues
④ Water contamination
⑤ Work should be carried out on emergency bases.

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	M. Awais		اویس
2	Anees		
3	Irfan		ارفان
4	Haidar Ali		Haidar
5	Moeen Ahmad		Moeen
6	M. Sayan	0344-2393586	Sayan
7	Imdad Ahmad		
8	Nasiudeen		
9	M. Ali		علی
10	Rizwan		
11	M. Zaman		
12	Nadir Ali		
13	Jamal		
14	Dilbar		Dilbar
15	Farooq		فاروق
16	Haroon		Haroon
17	M. Zubair		
18	Mirza.		مرزا
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PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 14/10/2022

Name of Facilitator _____ Location I. Area Korangi 5 (Near Korangi Flyover)

Venue Mumtaz bhai General store

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

① No drinking water.
② No sewer lines.
③ Mosquito's due to water stagnation
④ Movement issues due to poor road conditions.

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	M. Yameen		Yameen
2	Muneer Ahmad	0310-1181714	
3	M. Rehmat		
4	M. Shahnawaz		
5	Laique Ahmad	0313-2176913	
6	M. Idrees.		Idrees
7	M. Jawad		Jawad
8	M. Saeed		Saeed
9	M. Mairaj	0310-1189626	M. Mairaj
10	M. Hassan		
11	M. Shahid Akhtar	0322-2265949	
12	Shahzaib	0310-2886955	
13	Naveed	0314-8185002	Naveed
14	M. Ahmad	0311-2342622	
15	Subhean	0310-2500998	
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PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 14/10/2022

Name of Facilitator: _____ Location: _____

Venue: Haji - Rahim Khan Village
Near Gulshan-e-Korer Fatima.

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

(1) Water line not present
(2) We use tanker water.
(3) We have water tank but not functional.
(4) Tanker cost 5000 RS.
(5) Open Manhole issues. (Accident/incidents)
(6) Manhole filled with solid waste
(7) Mosquito's issue due to waste water stagnation
(8) Children go away from their houses to fill/carry drinking water.

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	Mustafa	0301-2958982	
2	Shahzad Ahmad	0324 3461625	
3	GHULAM QADIR		
4	Mashooq	03308489928	
5	Saleem		
6	Ali Akbar	0345-1344101	
7	Rabnawaz		
8	Hamessa	0344-2366787	
9	Abdul Latif	03456237439	
10	Nazeem Khan	0312-8721265	
11	Rizwan Ahmed	0316-2970985	
12	Munawar Ali	03146559713	
13	M. Abbas Ali	0301 2904643	
14	Abu Talib	03492224830	
15	M. Farhan.	0306-2592710	Farhan.
16	ZAHIR	03212150220	
17	M. Shafi		
18	M. Shafiq	03443842348	M. Shafiq
19		03003455437	
20	M. Sadiq	0341-2967269	
21			
22	Abdul-Karim		
23	M. Faraz	0312-1156327	
24	Uzair	0345-1294235	
25	Raja Zaheer Ahmad	0302-5586321	
26.	M. Tariq	0313-8147015	
27-	Haq Nawaz	0312-2049957	
28-	M Issa Katia	0300-8961007	

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PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 15/10/2022

Name of Facilitator: _____ Location: [نوروس چوراہی] Nawous chowrangi

Venue: Nawous Chaurangi

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

(1) Water supply issues.
(2) No water supply connection
(3) Solid waste disposal issues.
(4) By water tankers of [3000 – 5000 RS].

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	Hikmat ullah		
2	Ahmad	0305-3428756	Ahmad.
3	Usman		
4	M. Bilal	0321-2647790	
5	Rizwan	0319-2604253	
6	Haji Ubaid-ullah		
7	M. Furqan	0313-2467771	
8	Kamran	0316-8592277	
9	M. Usman	0345-3455466	Usman
10	Raheem	—	
11	Umair		
12	Adi		
13	Umar		
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PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 15/10/2022

Name of Facilitator: _____ Location: Shershah Roundabout

Venue: Shershah roundabout

Points to be discussed: (Hawker & Labor of pattan community)

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

(1) Open water pipeline
(2) Water stagnation issues.
(3) Pipe leakage issues.
(4) Drinking water contamination issue.
(5) Household water connection issues.

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	Rahim		Rahim
2	Sadiq		Sadiq
3	M. Yousaf		یوسف
4	Abbas		عباس
5	M. Amjad		Amjad
6	Abdul Razaq		رزاق
7	Anayat-ullah		عنایت
8	Nadeem Hussain		Nadir
9	Issrar - Khan		اسرار
10	Sher Muhammad		شیر
11	Qazi - Muhammad		QAZI MUHAMMAD
12	M. Nouman		
13	Shaugat		
14	Aftab	0340-2880595	آفتاب
15	M. Ghulam		M. Ghulam
16	Awais butt		
17	M. Nasir	0315 - 0832926	Nasir
18	Syed ajaib Shah	0321-2284656	Sajid Shah
19	M. Saeed.		
20	Fazal Muhammad.		فضل
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PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 15/10/2022

Name of Facilitator: _____ Location: Shahra-e-Quaideen

Venue: Qadri Hotel

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

(1) Water stagnation issue
(2) Solid waste issue
(3) leakage of sewer water at under pass
(4) No completion of work in time

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	Zeeshan		
2	Habib-ur-Rehmen		
3	Abid-Husain		
4	Ubaid-Ali		
5	Shoaib		
6	Sadaqat		
7	Nawaz		
8	Shoaib		
9	Salman		
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PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP

STAKEHOLDERS CONSULTATION

Sr. No. _____ Date: 15/10/2022

Name of Facilitator: _____ Location: Shahra-e-Quaideen.

Venue: Mujahid Aluminium.

Points to be discussed:

- Scope of the project and its various components
- The stakeholders involvement and their roles and responsibilities
- The importance of a Grievance Redress Mechanism & the role of the community in GRM
- Overview of land acquisition and resettlement related impacts
- Concerns and suggestions of the stakeholder regarding the projects' impacts

1. **Concerns/ Apprehensions Raised**

- Commuters face problem in travelling due to stagnant water.
- The underpass usually remains inundated
- The conditions of internal roads is even worse.
- Sewerage line needs replacement, ASAP.

2. **Points of Agreement:**

3. **List of Participants:**

Sr. No.	Name	Cell No.	Signatures
1	Moeb-ullah	—	
2	M. Hassan	—	
3	Nazar-udin	—	
4	Gulam Mustafa	—	
5	Saqlaqat	0345-2194687	
6	Hamad	—	
7	Amjad	—	
8	M. Naseem Akhtar	0300-2254291	
9	M. Ali	—	
10	M. Sahabir	—	
11	M. Sameer	0304-2401259	
12	M. Asif	—	
13	Imran.	0314-2386782	
14	M. Ashraf	0300-2167248	
15	Mujahid	0300-8255145	
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Annex – II

Environmental Codes of Practice (ECOP)

Environmental Codes of Practice

1. Rationale of this ECOPs

This Environmental Codes of Practice (ECOPs) sets out standards and procedures for managing the potential environmental impacts associating with the minor construction activities for repair/replacement of damaged sections of water lines and sewers under Emergency Works, SOP-1 for KWSSIP. The environmental impacts associated with this small civil work are considered to be minor, temporary and reversible, and readily managed with good practices during implementation. The ECOPs lay out outline simple rules and procedures regarding identification, monitoring and mitigation of those environmental impacts. The ECOPs shall be included in all relevant contracts.

2. Environmental Screening and Assessment

During construction, the potential impacts include dust and solid waste generation associated with minor civil work activities. These impacts are small, localized and can be mitigated by incorporating good civil work practices, including proper housekeeping measures, proper material storage and disposal of solid waste and pollution control.

In addition, to ensure the environmental sanitation and safety during operation, it is requested that design for chlorination stations shall be in line with the quality standards including appropriate ventilation, trash bin, lighting, fire extinguisher, eye-wash facilities and toilet facilities etc.

3. Project ECOP Implementation Arrangements

a. The Project Implementation Unit (PIU) – KWSSIP

The PIU-KWSSIP will be responsible for over-sighting the implementation of project. During implementation, the PIU is responsible for ensuring that the ECOPs will be incorporated in the bidding document and complied by contractors. The PIU has ultimate responsibility in the event of non-compliance with the ECOP during construction.

b. The Contractor

The Contractor, has the responsibility of establishing and maintaining contact with the PIU or delegated agencies and local residents and keeping them informed of construction matters likely to affect them. The Contractor and any agents or Sub-Contractors will be contractually required to comply with the requirements as specified in the ECOPs. The Contractor will responsible for implementation of the ECOPs, including workplace safety, and will ensure adequate resources are available for the implementation of the ECOPs throughout the construction period.

The Contractor has a duty to inform local residents likely to be affected by such activities at least 14 days prior to undertaking the works, as well as applying for the appropriate permits and licenses.

4. Construction Activities and Environmental Rules for Contractors

a. Management of Construction Site

This part describes basic requirements for all Contractors carrying out minor construction activities. It will be included in all construction contracts of the civil works. The Contractor is required to minimize, as far as reasonably practicable, any adverse environmental impact of their construction activities.

Prohibitions

The following activities are prohibited on or near the project site:

(a) Cutting of trees for any reason outside the approved construction area;
(b) Illegal dumping of demolition material and debris.
(c) Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
(d) Disturbance to anything with architectural or historical value;
(e) No burning of waste
(f) Use of alcohol by workers.

Working hours: Core working hours will be from 0800 to 1800 on weekdays and 0800 to 1300 on weekend. Individual site requirements which differ from the above will be considered on a site-by-site basis. Noisy operations shall not take place outside these hours without prior approval from the PIU and/or delegated agencies and local authorities.

Good housekeeping: The Contractor will follow a 'good housekeeping' policy at all times. This will include, but not necessarily be limited to the following: Ensure considerate site behavior of the Contractor's staff; Prohibit open fires; Ensure that appropriate provisions for dust control and road cleanliness are implemented; Remove rubbish at frequent intervals, leaving the site clean and tidy; Remove food waste; Frequently inspect, repair and re-paint as necessary all site hoardings to comply with the local conditions and local regulations, all flying post/ board is to be removed as soon as reasonably practicable and within 24 hours of notice**;** Maintain toilet facilities and other welfare facilities for its staff;

Public information and site access: As a minimum, the Contractor will provide public information on the site program (start and finish dates), plus the telephone for public contacts and/or requests especially during the school year. Any un-authorized entry to or exit from the sites should be control as much as possible.

Site layout and facilities: Location of site huts, office accommodation, toilets and welfare facilities should be accommodated within the boundaries of the site.

Emergency Procedures: The Contractor will ensure that emergency procedures are developed to facilitate effective actions in case of medical/fire emergency as well as environmental pollution (major spillage of gasoline, used oil, and/or toxic chemicals, etc.). The emergency procedure will contain emergency phone numbers and the method of notifying the statutory authorities. Contact numbers for the key staff of the contractor will also be included.

Fire prevention and control: All construction sites and associated accommodation or welfare facilities will have in place appropriate plans and management controls to prevent fires. The site fire plans will be prepared and will have due regard to the GoS regulations. During operation and maintenance of equipment and vehicles, the Contractor will ensure that its workers are well aware of the procedures and have enough knowledge to comply with them. The specification of non-combustible materials, products and packaging will be pursued wherever reasonably practicable. The project will also have to comply with GoS requirements as may be appropriate at specific sites.

Operation of equipment: The Contractor must take all reasonable precautions to ensure that equipment is operated in a manner so as not to cause safety risk and/or nuisance to surrounding residents and occupiers. Operations of crane and other large equipment will have to be closely supervised. Permission may be required as per GoS regulations.

Clearance of the construction site after completion: On completion of the works the Contractor will clear away and remove all materials and rubbish and temporary works of every kind. The site will be left clean and in a condition to the satisfaction of the PIU and/or delegated agencies.

5. Management of Environment and Sanitation

Nuisance, Dust and Noise Control

To control nuisance, dust and noise in the construction sites the Contractor should:

(a) To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
(b) In sensitive areas (including residential neighborhoods, hospitals, etc.) more strict measures may need to be implemented to prevent undesirable noise levels. Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people (children, elders).
(c) Place dust screens around construction areas, fencing should be provided along the boundary so that the emissions do not affect the immediate neighbors, paying particular attention to areas close to housing, commercial areas, and recreational areas.
(d) Spray water periodically as needed on construction areas, especially at site located near residential area
(e) Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Disposal of Construction Waste

The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

Debris generated due to the demolition of the existing structures shall be suitably reused, to the extent feasible. The disposal of remaining debris shall be carried out only at sites identified and approved by local authorities. The contractor should ensure that these disposal sites: (a) are not located within designated forest areas; (b) do not impact natural drainage courses; Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas. Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials. In the event

any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such debris and restore the affected area to its original state to the satisfaction of the PIU and/or delegated agencies and local communities.

Water quality

The Contractor must take all the efforts to prevent wastes (solid and liquid) discharge into all rivers and canals and to protect surface and groundwater from pollution and other adverse impacts including changes to water levels, flows and general water quality. Whenever possible, the Contractor must minimize the amounts of wastewater that need to be discharged and find alternative means of disposal. Liquid spills of lubricant, fuel and oil within the site should be attended at the earliest in order to minimize land & groundwater contamination. The Contractor will ensure that any seepage and wastewater arising from the works must be collected and discharged via a settlement tank. Water drainage must be designed to avoid stagnant conditions that could create bad smell and unsanitary condition in the construction area and surrounding environment.

Workforce and Workers; Sanitation

The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.

The Contractor shall not allow the use of fuel wood for cooking or heating at the construction site or surrounding area.

The Contractor shall ensure that site offices, depots, and workshops are located in appropriate areas. Clean and well-maintained toilets should be made available.

Clean water shall be adequately provided for workers by the Contractor.

Safety during Construction

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all government safety requirements and any other measures necessary to avoid accidents, including the following:

(a) Notice signs/board shall properly be installed at the construction sites
(b) If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;
(c) Conduct safety training for construction workers prior to beginning work;
(d) Provide necessary personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.,) for construction workers and enforce their use;
(e) During emergencies of any kind, suspend all work.

Community Relations

To enhance adequate community relations the Contractor shall:

(a) Inform the local authorities and community about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.

(b) Limit construction activities at night. When necessary, ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.

Physical Cultural Property Chance-finds Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects the Contractor shall:

(c) Stop the construction activities in the area of the chance find;
(d) Delineate the discovered site or area;
(e) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Directorate of Archeology take over;
(f) Notify the supervisory Engineer who in turn will notify the responsible local authorities immediately (within 24 hours or less);
(g) Responsible local authorities, would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
(h) Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
(i) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
(j) Construction work could resume only after permission is given from the responsible local authorities concerning safeguard of the heritage.

Annex – III

Workers' Code of Conduct

Annex - III

Workers' Code of Conduct

I, _____, acknowledge that preventing any misconduct as stipulated in this code of conduct, including sexual exploitation and abuse (SEA), sexual harassment (SH), and child abuse/exploitation are important. Any activity, which constitute acts of gross misconduct are therefore grounds for sanctions, penalties or even termination of employment. All forms of misconduct are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit any such misconduct will be pursued as appropriate. I agree that while working on this project, I will:

1. Consent to security background check;
2. Treat women, children (persons under the age of 18) and persons with disability with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, birth or other status;
3. Not use language or behaviour towards men, women or children/learners that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate;
4. Carry out his/her duties competently and diligently;
5. Comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
6. Maintain a safe working environment including by:
    a. Ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
    b. Wearing required personal protective equipment;
    c. Using appropriate measures relating to chemical, physical and biological substances and agents; and
    d. Following applicable emergency operating procedures.
7. Report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and danger to his/her life or health;
8. Treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
9. Not engage in any form of sexual harassment including unwelcome sexual advances, requests for sexual favours, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
10. Not participate in sexual activity with children/learners—including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defence;
11. Not exchange money, employment, goods, or services for sex, with community members including sexual favours or other forms of humiliating, degrading or exploitative behaviour;
12. Attend trainings related to HIV and AIDS, SAE/SH, occupational health and any other relevant courses on safety as requested by my employer;

13. Report to the relevant committee any situation where I may have concerns or suspicions regarding acts of misconduct by a fellow worker, whether in my company or not, or any breaches of this code of conduct provided it is done in good faith;
14. Regarding children (under the age of 18):
    a) Refrain from hiring children for domestic or other labour, which is inappropriate given their age, or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
    b) Comply with all relevant local legislation, including labour laws in relation to child labour.
15. Refrain from any form of theft for assets and facilities including from surrounding communities.
16. Remain in designated working area during working hours;
17. Refrain from possession of alcohol and illegal drugs and other controlled substances in the workplace and being under influence of these substances on the job and during workings hours;
18. Follow prescribed environmental occupation health and safety standards;
19. Channel grievances through the established grievance redress mechanism.

I understand that the onus is on me to use common sense and avoid actions or behaviours that could be construed as misconduct or breach this code of conduct.

I acknowledge that I have read and understand this Code of Conduct, and the implications have been explained with regard to sanctions on-going employment should I not comply.

Signed by: _____

Signature: _____

Date: _____

For the Employer/Contractor

Signed by: _____

Signature: _____

Date: _____

Annex – IV

Chance Find Procedures

CHANCE FIND PROCEDURES

Project may involve deep excavation. Therefore, the possibility of chance find is not ignorable. In case of any chance find, the contractor will immediately report through Supervision Consultant to Directorate General (DG) of Antiquities & Archaeology, Government of Sindh to take further suitable action to preserve those antique or sensitive remains. Representative of the "Director Archaeology and Museum (DAM)" will visit the site and observed the significance of the antique, artifact and Cultural (religious) properties and significance of the project. The documentation will be completed and if required suitable action will be taken to preserve those antiques and sensitive remains.

In case any artifact, antiques and sensitive remains are discovered, chance find procedures should be adopted by contractor workers as follows:

- Stop the construction activities in the areas of chance find;
- Delineate the discovered site or area;
- Consult with the local community and provincial Archeological Department
- The suggestion of the local communities and the concerned authorities will be suitably incorporated during taking the preventive measures to conserve the antique, artifact and cultural (religious) properties
- Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remain, a night guard shall be arranged until the responsible local authorities take over;
- After stopping work, the contractor must immediately report the discovery to the Supervision Engineer.

The contact Address of Directorate General of Antiquities & Archaeology is given below:

Antiquities House. C/82, Block-2,
Near Bilal Masjid, Clifton, Karachi,
Sindh 75600

Tel: 021-99212126
021-99212127

Annex – V

Standard Operating Procedures (SOPs) for COVID-19

STANDARD OPERATING PROCEDURES (SOPs) FOR COVID-19
(Based on World Bank Guidelines)

1 Introduction

The COVID-19 pandemic presents Governments with unprecedented challenges. Addressing COVID-19 related issues in both existing and new operations starts with recognizing that this is not business as usual and that circumstances require a highly adaptive responsive management design to avoid, minimize and manage what may be a rapidly evolving situation. In many cases, reasonable efforts must be put in during the circumstances, recognizing that what may be possible today may be different next week (both positively, because more supplies and guidance may be available, and negatively, because the spread of the virus may have accelerated).

2 Challenges with Construction/ Civil Works

Projects involving construction/ civil works frequently involve a large work force, together with suppliers and supporting functions and services at the designated location. The work force may comprise workers from local areas more specifically. They may need to live in on-site accommodation, lodge within communities close to work sites or return to their homes after work. There may be different contractors permanently present on site, carrying out different activities, each with their own dedicated workers.

Given the complexity and the concentrated number of workers, the potential for the spread of infectious disease in projects involving construction is extremely serious, as are the implications of such a spread. Projects may experience large numbers of the work force becoming ill, which will strain the project's health facilities, have implications for local emergency and health services and may jeopardize the progress of the construction work and the schedule of the project. Such impacts will be exacerbated where a work force is large and/or the project is in remote or under-serviced areas. In such circumstances, relationships with the community can be strained or difficult and conflict can arise, particularly if people feel they are being exposed to disease by the project or are having to compete for scarce resources. The project must also exercise appropriate precautions against introducing the infection to local communities.

3 Responsibility/ Planning of the PIU of KWSSIP

PIU shall ensure that sub projects (i) are taking adequate precautions to prevent or minimize an outbreak of COVID-19, and (ii) have identified what to do in the event of an outbreak.

4 Contractor cover

The Contractor should identify measures to address the COVID-19 situation. What will be possible will depend on the context of the project: the location, existing project resources, availability of supplies, capacity of local emergency/ health services, the extent to which the virus already exist in the area. A systematic approach to planning, recognizing the challenges associated with rapidly changing circumstances, will help the project put in place the best measures possible to address the situation. As discussed above, measures to address COVID-19 may be presented in different ways (as a contingency plan, as an extension of the existing project emergency and preparedness plan or as standalone procedures). PIU and contractor should refer to guidance issued by relevant authorities, both national and international (e.g., WHO).

Addressing COVID-19 at a project site goes beyond occupational health and safety, and is a broader project issue which will require the involvement of different members of a project management team in all selected areas where repair/ rehabilitation works will be carried out. In many cases, the most effective approach will be to establish procedures to address the issues, and then to ensure that these procedures are implemented systematically. Where appropriate given the project context, a designated team should be established to address COVID-19 issues, including PIU representatives, the Supervising Engineer, management (e.g. the project manager) of the contractor and sub-contractors, security, and medical and OHS professionals. Procedures should be clear and straightforward, improved as necessary, and supervised and monitored by the COVID-19 focal point(s). Procedures should be documented, distributed to all contractors, and discussed at regular meetings to facilitate adaptive management. The issues set out below include a number that represent expected good workplace management but are especially pertinent in preparing the project response to COVID- 19.

(a) Assessing Workforce Characteristics

Many construction sites will have a mix of workers e.g., workers from the local communities specifically; workers from a different part of the country. Workers will be employed under different terms and conditions and be accommodated in different ways. Assessing these different aspects of the workforce will help in identifying appropriate mitigation measures:

- The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g., 4 weeks on, 4 weeks off).
- This should include a breakdown of workers who reside at home (i.e., workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.
- Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.
- Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided.
- Consideration should be given to requiring workers lodging in the local community to move to site accommodation (subject to availability) where they would be subject to the same restrictions.
- Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work.

(b) Entry/ Exit to the Work Site and Checks on Commencement of Work

Entry/ exit to the work site should be controlled and documented for both workers and other parties, including support staff and suppliers. Possible measures may include:

Establishing a system for controlling entry/ exit to the site, securing the boundaries of the site, and establishing designating entry/ exit points (if they do not already exist). Entry/ exit to the site should be documented.

- Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID -19 specific considerations.
- Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry.
- Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues.
- Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.
- Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.

(c) General Hygiene

Requirements on general hygiene should be communicated and monitored, to include:

- Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms (for further information see WHO COVID-19 advice for the public).
- Placing posters and signs around the site, with images and text in local languages.
- Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used.
- Review worker accommodations, and assess them in light of the requirements set out in IFC/EBRD guidance on Workers' Accommodation: processes and standards, which provides valuable guidance as to good practice for accommodation.
- Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected (see paragraph (f)).

(d) Cleaning and Waste Disposal

Conduct regular and thorough cleaning of all site facilities. Review cleaning protocols for key construction equipment (particularly if it is being operated by different workers). This should include:

- Providing cleaning staff with adequate cleaning equipment, materials and disinfectant.
- Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas.
- Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives.
- Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials).

(e) Adjusting Work Practices

Consider changes to work processes and timings to reduce or minimize contact between workers, recognizing that this is likely to impact the project schedule. Such measures could include:

- Decreasing the size of work teams.
- Limiting the number of workers on site at any one time.
- Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes.
- Continuing with the usual safety trainings, adding COVID-19 specific considerations. Training should include proper use of normal PPE. While as of the date of this note, general advice is that construction workers do not require COVID-19 specific PPE, this should be kept under review (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- Reviewing work methods to reduce use of construction PPE, in case supplies become scarce or the PPE is needed for medical workers or cleaners. This could include, e.g. trying to reduce the need for dust masks by checking that water sprinkling systems are in good working order and are maintained or reducing the speed limit for haul trucks.
- Arranging (where possible) for work breaks to be taken in outdoor areas within the site.

At some point, it may be necessary to review the overall project schedule, to assess the extent to which it needs to be adjusted (or work stopped completely) to reflect prudent work practices, potential exposure of both workers and the community and availability of supplies, taking into account Government advice and instructions.

(f) Project Medical Services

- Training medical staff, which should include current WHO advice on COVID-19 and recommendations on the specifics of COVID-19. Where COVID-19 infection is suspected, medical providers on site should follow WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected.

- Training medical staff in testing, if testing is available.
- Assessing the current stock of equipment, supplies and medicines on site, and obtaining additional stock, where required and possible. This could include medical PPE, such as gowns, aprons, medical masks, gloves, and eye protection. Refer to WHO guidance as to what is advised (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- If PPE items are unavailable due to world-wide shortages, medical staff on the project should agree on alternatives and try to procure them. Alternatives that may commonly be found on constructions sites include dust masks, construction gloves and eye goggles. While these items are not recommended, they should be used as a last resort if no medical PPE is available.
- Ventilators will not normally be available on work sites, and in any event, intubation should only be conducted by experienced medical staff. If a worker is extremely ill and unable to breathe properly on his or her own, they should be referred immediately to the local hospital (see (g) below).
- Review existing methods for dealing with medical waste, including systems for storage and disposal (for further information see WHO interim guidance on water, sanitation and waste management for COVID-19, and WHO guidance on safe management of wastes from health-care activities).

(g) Local Medical and Other Services

Given the limited scope of project medical services, the project may need to refer sick workers to local medical services. Preparation for this includes:

- Obtaining information as to the resources and capacity of local medical services (e.g. number of beds, availability of trained staff and essential supplies).
- Conducting preliminary discussions with specific medical facilities, to agree what should be done in the event of ill workers needing to be referred.
- Considering ways in which the project may be able to support local medical services in preparing for members of the community becoming ill, recognizing that the elderly or those with pre-existing medical conditions require additional support to access appropriate treatment if they become ill.
- Clarifying the way in which an ill worker will be transported to the medical facility, and checking availability of such transportation.
- Establishing an agreed protocol for communications with local emergency/medical services.
- Agreeing with the local medical services/specific medical facilities the scope of services to be provided, the procedure for in-take of patients and (where relevant) any costs or payments that may be involved.
- A procedure should also be prepared so that project management knows what to do in the unfortunate event that a worker ill with COVID-19 dies. While normal project procedures will continue to apply, COVID-19 may raise other issues because of the infectious nature of the disease. The project should liaise with the relevant local authorities to coordinate what should be done, including any reporting or other requirements under national law.

(h) Instances or Spread of The Virus

- If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site.
- If testing is available on site, the worker should be tested on site. If a test is not available at site, the worker should be transported to the local health facilities to be tested (if testing is available).
- If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project.
- Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of.
- Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms.
- Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms.
- If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible.
- If workers live at home and has a family member who has a confirmed or suspected case of COVID-19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms.

(i) Training and Communication with Workers

- Training of workers should be conducted regularly, as discussed in the sections above, providing workers with a clear understanding of how they are expected to behave and carry out their work duties.
- Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work.
- Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted.
- Communications should be clear, based on fact and designed to be easily understood by workers, for example by displaying posters on handwashing and social distancing, and what to do if a worker displays symptoms.

Annex – VI

Health & Safety Management Plan (HSMP)

Health & Safety Management Plan (HSMP)

1.0 Introduction

This health and safety management plan has been prepared to identify and outline the manner in which construction site health and safety aspects will be managed to ensure the safe and efficient performance of the construction phase activities and to minimize adverse effects on the existing community and workers arising from construction activities. HSMP plan is prepared under the guidelines given in Health and Safety Framework for South Asia Region by the World Bank.

This plan is designed to identify, evaluate, and control health and safety hazards for the purpose of protecting employees. The plan provides for emergency response activities at the job site as well as covering site hazard analysis, training requirements, engineering controls, materials handling, and safe construction operations. This plan is intended to provide guidance and information in dealing with the hazards that may be faced on the construction site by the contractor and its workers.

The consultant as a third-party validator will monitor the compliance of the plan by the contractor and its workers on each construction site.

The purpose of this plan is to illustrate safety issues specific to the KWSSIP. This plan is intended to maintain a safe work environment and effectively reduce the number of accidents resulting in personal injury, property damage, and damage to construction equipment.

2.0 Scope of Project

2.1 Scope of Work

KWSB has conceived KWSSIP in the form of a series of projects (SOPs), which form a long-term program to address the serious water and sewerage service gaps in the rapidly growing city of Karachi.

This HSMP focuses on the repair/ rehabilitation of leakages of existing water supply and sewerage system.

2.2 Site Location

The proposed project locations are spread in all seven districts of Karachi.

3.0 Health and Safety Responsibilities

The effectiveness and success of the safety plan implementation depend upon the active participation and cooperation of all employees. The duties and responsibilities of all employees under this policy are the following:

3.1 Project Engineer

- Prepare the Site-Specific Safety Plan.
- Direct and coordinate health and safety regulations related to the construction site.
- Participate in post-accident investigations.
- Assist in formulating policy matters.
- Implement contractor Safety Program and Policy

3.2 Foremen/Supervisors

- Be familiar with, explain, and enforce health and safety plan under his jurisdiction.
- Direct and coordinate health and safety activities within the area or responsibility
- Ensure safety devices and proper PPE are used by employees under supervision.
- Instruct and train all employees within the area of responsibility in job health and safety requirements, including (but, not limited to) hazard recognition and avoidance. Also, foreman/front-line supervisors must require compliance by employees with the established safety rules.
- Direct the correction of unsafe conditions.
- Ensure safety equipment is available, maintained, used, and stored correctly.
- Ensure injuries are treated promptly and reported properly.
- Participate in post-accident investigations.
- Coordinate daily job site inspection.
- Implement health and safety plan at each site as per required.

3.3 Construction Workers

The main responsibility of every worker at the construction site will be to follow the health and safety instructions and procedures.

- Be familiar with and comply with proper health and safety practices.
- Use the required safety devices and proper PPE.
- Notify the supervisor immediately of unsafe conditions/- acts, accidents, and injuries.
- Implement the health and safety plan

3.4 Subcontractors

By the contract, the subcontractors will have to comply with and ensure the compliance of their employees with the provisions of health and safety policy as well as their own safety program. Failure to fulfill this requirement is a failure to meet the conditions of the subcontract.

3.5 Supervision Consultant (SC)

SC will validate the effective implementation of the health and safety plan at the site. PIU-KWSSIP will be overall responsible for the safe construction work at each site.

4.0 General Health and Safety Procedures

4.1 Personal Protective Equipment (PPE)

The contractor provides Personal Protective Equipment (PPE) to all employees. Hard hats, safety glasses, and safety work boots are required to be worn at all times when on the job site. Reflective vests are required when working outside around equipment or traffic. Exceptions may be made to this PPE requirement only under an approved contractor work plan. Employees learn where to get PPE during their new-hire orientation and are responsible for wearing and maintaining the required PPE. Additional PPE may be required depending on the task and if there is a potential for exposure to hazardous conditions. PPE requirements are reviewed by the foreman. Employees are expected to use reasonable judgment regarding whether additional PPE (beyond the required) is necessary for certain tasks. If employees are unsure of the type of PPE required for a specific task or job, they should ask the supervisor.

4.2 Equipment Use and Operation

Equipment is used only for its intended use and as recommended by the manufacturer. Using equipment for purposes other than what it is designed for is prohibited. Employees are prohibited from operating a vehicle in a reckless manner or at a speed greater than is reasonable and proper, with due regard for weather, traffic, the character of roadway, load, type of vehicle, and any other conditions which may affect the safe operation of the vehicle. The vehicle must be kept under control at all times and special care is exercised when transporting personnel.

Employees may only ride equipment if there are seats or equal protection available for each person. Seatbelts are worn at all times while operating equipment with seats. No cell phone or earbud is used while operating equipment.

4.3 Repair

Employees are prohibited from making repairs, alterations, or attachments to equipment in the field except with the permission of the superintendent, foreman, or equipment mechanic. Only qualified personnel will perform repairs on equipment. Such repairs, alterations, or attachments are documented on the appropriate shop forms.

Employees are prohibited from removing a guard, safety device, or appliance from equipment or machinery except to make repairs. While making repairs, employees use appropriate lockout/tag-out procedures. When repairs are complete, the guard, safety device, or appliance is replaced immediately.

4.4 Conduct

The following conduct is prohibited and may result in discipline up to and including termination:

- Horseplay and scuffling on the job.
- Making a false report or misrepresentation.
- Fighting.
- Use of alcohol or any other drugs
- Dishonesty and theft of the property.
- Deliberate misuse of the equipment.
- Unnecessary risk-taking.
- Violating or disobeying any instruction given by a supervisor

5.0 General Jobsite Procedures

5.1 New Hire Orientation

New-hire orientation may consist of, but is not limited to, the following:

- Have the employee read the health and safety plan and other safety requirements, guidelines etc. Answer any questions the new hire may have about these policies and request a signature on the Statement of Understanding.
- Orient the employee to the job site indicating the location of the emergency facilities, portable fire extinguishers, first-aid station, emergency phone numbers, public notices, and any job site-specific information.
- Explain the injury and accident policy.
- Review the written hazard communication program. Discuss hazards, container labeling, and the use of protective equipment.
- Explain the emergency response plan for catastrophic events such as fire, explosion, etc.
- Issue PPE as required for the job

5.2 Training

Training and education are necessary for the success of this policy. Employees are trained to recognize job site hazards and the procedures to follow to minimize these hazards. Training may consist of (but is not limited to) the following:

- Weekly job site safety meetings.
- Orientation training for new hires.
- Individual job/task training, including the applicable regulations/standards for the specific job/task.

Supervisors and management receive ongoing safety training throughout the year.

5.3 Safety Meetings

Weekly safety meetings are held on the job site. All employees and subcontractors are required to attend. The meetings may cover a range of safety-related topics. The format and content of the

meetings are up to the discretion of the superintendent. Monthly safety meetings are held for all foremen, superintendents, project managers, project engineers, contractors, and other management personnel. These meetings are for the purpose of discussing companywide safety issues and providing continued safety training and education.

5.4 Safety Inspections

The superintendent and foreman conduct an initial safety inspection at the beginning of each project. In addition, a daily safety inspection of the job site is conducted by the contractor employees, employees of a subcontractor, or some combination thereof. The inspection is rotated between all workers on the job site. Any safety concern found during the inspection is reported. If a worker is unclear about any safety aspect, the foreman or project Engineer helps. If the area being inspected requires a *competent person*, the employee conducts the inspection with the competent person. Also, if time allows, the foreman for the worker conducting the inspection is encouraged to walk through it with them.

5.5 Hazard Communication

The contractor needs to develop a written hazard communication plan. It will be explained to each employee during the new-hire orientation. The purpose of the hazard communication plan is to provide employees with information on the chemical and physical hazards that may be present at the job site. Safety Data Sheets for all chemicals will be kept on site.

5.6 Job Hazard Analysis

A job hazard analysis may be developed covering the major activities of construction, the hazards associated with these activities, and ways to mitigate these hazards.

5.7 Housekeeping

Housekeeping is one of the most important factors for a safe job site. Form material should be scraped and all protruding nails pounded down. All other debris is cleared from work areas, passageways, and stairs. Excess materials are stacked neatly out of the way. Tools should be stored in the toolbox so these are available for all employees to use.

Combustible scrap and debris are removed at regular intervals during the course of construction. Containers with covers are provided for the collection and separation of waste, trash, oily and used rags, and other such refuse, which is removed safely and on a regular basis.

Foreign object and debris (FOD) is a significant concern in nearby occupied spaces and construction areas. It is extremely important to keep all trash and debris contained at this site. Housekeeping will be strictly enforced

5.8 Fall Protection

The contractor provides fall protection when employees are exposed to fall hazards.

Fall protection may consist of, but is not limited to, the following:

- A stairway or ladder is provided at any point of access where there is a break in elevation of 19 inches or more.
- Guardrails are installed for all leading-edge work. For loading bay locations fall-arrest systems or fall-restraint systems are used.
- Safety harnesses with approved lanyards and tie-off points are used for all other fall protection unless an appropriate procedure or device was approved in advance by a competent person.
- Stilts may be used on job sites but work area floors must be clean/clear of all debris, materials, and equipment.

5.9 Electrical Safety

Electrical safety may consist of, but is not limited to, the following:

- Live electrical parts are guarded against accidental contact by cabinets, enclosure, location, or guarding.
- Extension cords are kept in safe, working condition.
- All lamps for general illumination have the bulbs protected against breakage. All light sockets are filled with a working bulb.
- Employees will not work in such close (able to contact) proximity to any part of an electric power circuit unless the circuit is de-energized, grounded, or guarded by insulation.
- De-energized equipment or circuits are locked out and tagged out. The tags identify the equipment or circuits being worked on.
- All generators used for temporary power shall be grounded according to manufacturers' specifications.
- Equipment shall not be operated closer than 10 feet from power lines less than 50kV. Safe distance will increase near higher voltage power lines, (over 50kV)

5.10 Tools

The contractor provides tools for employees to use. Only trained employees are allowed to use such tools. The safe use of tools may consist of, but is not limited to the following:

- Unsafe or defective tools are removed from service and tagged out.
- Power tools are turned off and motion stopped before setting down.
- Tools are disconnected from the power source before changing drills, blades, or bits and before any repair or adjustment is made. Running tools are not left unattended.

- Portable abrasive grinders have guards installed covering the upper and back portions of the abrasive wheel.

5.11 Scaffolds

Scaffolds are erected, moved, dismantled, or altered under the supervision of a competent person for scaffolding. Scaffold use consists of, but is not limited to, the following procedures:

- Standard guardrails are installed on all open sides and ends of scaffold platforms and/or work levels more than ten feet below the ground.
- Scaffolds four to ten feet in height with a minimum horizontal dimension in any direction less than 45 inches have standard railings installed on all open sides/ends.
- Platforms at all working levels are fully planked. Planking is laid tight with no more than one inch space between them, overlap at least 12 inches, and extends over end supports 6-12 inches unless cleats are used.
- The front edge of all platforms is no more than 14 inches from the face of the work, except plastering/lathing may be 18 inches.
- Mobile scaffolds are erected no more than a maximum height of four times their minimum base dimension.
- Scaffold casters/wheels are locked whenever the platform is occupied.
- Scaffolds are not overloaded beyond their design loadings.
- Scaffold components are not used as tie-off/anchor points for fall-protection devices.
- Portable ladders, hook-on ladders, attachable ladders, integral prefabricated scaffold frames, walkways, or direct access from another scaffold or structure are used for access when platforms are more than two feet above or below a point of access.
- Cross braces are not used as a means of access to scaffolds.
- Scaffolds are not erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come close to exposed and energized power lines than the following:
    - Three feet from insulated lines of less than 300 volts;
    - Ten feet plus for any other insulated or uninsulated Lines

5.12 Excavation and Trenches

Excavation and trenching are done in the presence of a competent person and in compliance with, but not limited to, the following procedures:

- Any excavation or trench five feet or more in-depth is provided cave-in protection through shoring, sloping, benching, or the use of hydraulic shoring, trench shields, or trench boxes. Trenches less than five feet in depth and showing potential of cave-in are also provided cave-in protection. Specific requirements of each system are dependent upon the soil classification as determined by a competent person.
- A competent person inspects each excavation/trench daily prior to the start of work, after every rainstorm or other hazard-increasing occurrence, and as needed throughout the shift.

- Any material and equipment are kept at least two feet from the edge of the trench or excavation.

5.13 Ladders

Ladders are inspected during the weekly inspections to identify any unsafe conditions. Any ladders found to be unsafe are taken out of service. Extension ladders extend three feet above the work surface and are 100 percent tied off. Step ladders are only used in the open position. Ladders are stored lying down. No standing on the top step or first rung below the top of a step ladder.

5.14 Illumination

Construction areas and storage areas where work is in progress are lighted with either natural or artificial illumination.

5.15 Motor Vehicles and Mechanized Equipment

Vehicles and equipment are only operated by qualified persons (training or experience). All equipment operators are responsible for checking, on a daily basis, all fluid levels, drive components, and hydraulics. In addition, operators visually inspect the engine and look for structural breaks and cracks on the machine. Any and all deficiencies must be reported to a supervisor immediately.

When equipment is stopped or parked, parking brakes are set and other safety precautions are taken as required for the type of equipment such as placing the forks flat on the ground. Keys shall be removed from equipment at the end of each shift.

5.16 Severe Weather

Outside construction operations including, but not limited to site work, and concrete work are suspended if severe wind or rain conditions present safety hazards at the worksite. Rain and wind storm hazards are evaluated and appropriate measures are taken to abate potential hazards.

5.17 Accident

All accidents and near misses must be reported immediately to the foreman or superintendent. An accident report is then filled out by the employee and the supervisor. Filling out an accident report does not require the delay of medical attention. Any injury is treated first. Employees file such reports without fear of reprisal by management. The accident or incident may be discussed at weekly safety meetings to avoid that sort of accident in the future.

5.18 First Aid

First-aid kits are available in the project office, at the appropriate and accessible locations as indicated during orientation. In addition, foremen and superintendents maintain current first aid boxes at the site.

5.19 Fire Protection

The contractor maintains appropriate fire extinguishers at the fire-prone areas of the construction site. All equipment is fitted with portable fire extinguishers. Employees are instructed on the location and usage of these fire extinguishers. Emergency telephone numbers for fire protection and emergency medical services are posted on the field office bulletin board.

5.20 Emergency Action Plan

Each job site develops an emergency action plan that is reviewed with each employee during orientation. The emergency action plan covers emergency escape procedures, procedures followed by employees remaining to operate critical operations before they evacuate, procedures to account for all employees, rescue and medical duties, and how to report emergencies.

5.21 Environmental Protection Plan

This health and safety plan also contains an Environmental Protection Plan for the control, prevention, management, containment, cleanup, and disposal of petroleum products or other hazardous substances which may be generated on each project site. The Project Engineer directs measures to control and prevent accidental discharge of petroleum products or other hazardous substances during storage and transfer on all job sites. Any onsite storage is in approved containers. Absorbent pads and other recovery equipment shall available to contain and recover any fuel accidentally spilled. Any spills and contaminated soils are cleaned and disposed of in accordance with applicable requirements.

5.22 Traffic and Pedestrian Control

A traffic control plan will be developed and put in place prior to beginning work on the project for the protection of workers and the general public. Barricades and signage must place around job site areas to reroute vehicle traffic and keep pedestrians out of the job site.

Project Engineers and Superintendents will evaluate the site before work starts to plan site control. Fencing, signage, and barricades shall be erected and secured as to keep pedestrians out.

Any time while performing work near or on a roadway and a worker has a sense of traffic patterns not being controlled properly or speeds too extreme for conditions, the worker should remove

himself from the area and notify Supervisor. The Project Engineer shall stress and discuss, at weekly meetings, for all workers to be aware of traffic hazards and pedestrians.

5.24 Concrete Work

The project involves concrete work. There are many hazards associated with this work including but not limited to; Slips Trips, Falls, Strains and Sprains, Eye Injuries, Chemical Burns, and Silica Exposure. The risk assessment shall be performed for all concrete work to minimize the associated hazards

6.0 Monitoring and Reporting

Monitoring the implementation of the health and safety plan and progress reporting will be very important for the effective enforcement of the plan. PIU project team along with the supervision consultant will validate effective reinforcement of HSMP. The supervision consultant will frequently visit the construction sites and monitor the effectiveness of the plan implementation. The status of implementation will be reported to the PIU fortnightly.

Annex – VII

Environmental Monitoring Checklist

Monitoring and Supervision Checklist

Project	
Site Location	
Current Status	
Supervision Date	
Supervised By	

Inspection Items	Implementation			Remarks (i.e., specify location, good practices, problem observed, possible cause of nonconformity, and/or proposed corrective/preventative actions)
	Yes	No*	N/A	
1. Air Pollution Control				
1.1. Vehicle loads covered with any suitable material while transporting construction material?				
1.2. Are stockpiles of dusty materials covered or watered?				
1.3. Does the Construction Contractor (CC) have the proper material handling practices at the site?				
1.4. Others (please specify)				
2. Surface and Ground Water Pollution Control				
2.1. Area chemicals or hazardous material stored at designated places?				
2.2. Are effluents from the construction sites released to drinking water sources, cultivation fields, irrigation channels, and critical habitats?				
2.3. Does the CC have tarpaulin sheets available at the site?				
2.4. Others (please specify)				
3. Noise Control				
3.1. Are machinery operations and high noise activities carefully planned and scheduled?				
3.2. Are high noise activities ceased between 20:00 and 06:00hrs?				
3.3. Is the noise level monitoring carried out periodically? And is the monitoring register maintained?				
3.4. Others (please specify)				
4. Solid Waste Management				
4.1. Is recycling of solid waste carried out?				
4.2. Are the construction sites equipped with temporary refuse bins?				
4.3. Is the waste dumped or thrown?				

around the project site?				
4.4. Is the waste tracking register maintained at the site?				
4.5. Is the waste properly disposed of in designated areas and not affecting the drinking water sources, cultivation fields, irrigation channels, natural drainage paths, the existing waste management system in the area, local routes, and the general aesthetic value of the area?				
4.6 Is Covid 19 prevention waste being handled and stored properly?				
4.7. Others (please specify)				
5. Occupational Health and Safety				
5.1. Are WB Group's Environment, Health, and Safety(EHS) Guidelines implemented in letter and spirit?				
5.2. Are appropriate personal protective equipment (PPE) provided to minimize risks, such as appropriate outerwear, boots, and gloves; safety helmets as well as per COVID-19 requirements?				
5.3. Are first-aid equipment at works provided?				
5.4. Is water stagnation observed near the construction site?				
5.5 Are protocols for slips and trips being followed?				
5.6. Are protocols for work at height being followed?				
5.7. Is training for workers for the use of PPE provided?				
5.8. Are procedures for documenting and reporting accidents, diseases, and incidents implemented at the site?				
5.9. Others (please specify)				
6. Labor Issues				
6.1. Are labor locally procured for the construction activities?				
6.2. Is there any child working?				
6.3. Others (please specify)				
7. Project Exclusions				
7.1. Is the GRM implemented for the amicable resolution of disputes or conflicts?				
7.2. Others (please specify)				

Annex – VIII

GRC Notification

KARACHI WATER & SEWERAGE SERVICES IMPROVEMENT PROJECT
Project Implementation Unit
Karachi Water & Sewerage Board
40-G, Street 40, Block 6 PECHS, Karachi. Pakistan
TELEPHONE: +92-21-34374081, +92-21-99330279

No: PD(KWSSIP)/KWSB/2021/288

Dated: 12th October, 2021.

Notification

In order to reddress the Grievances received at the Karachi Water and Sewerage Services Improvement Project, a Grievance Redressal Committee (GRC) is hereby constituted at the KWSSIP PIU with immediate effect with following composition.

1. Project Director (PD) KWSSIP	Chairman
2. Gender Specialist KWSSIP	Member
3. Concerned Project Manager PIU-KWSSIP	Member
4. Senior Social Safeguard Specialist (Consultant-Side)	Member
5. Ms. Malaka from Aurat Foundation (Representative of Civil Society)	Member
6. Social Development Specialist KWSSIP	Member / Secretary

Terms of Reference (ToR's)

The GRC shall be responsible for:

- Allow stakeholders the opportunity to lodge complaints and raise concerns;
- Ensure that comments, responses, and grievances are handled in a fair and transparent manner, in line with the applicable framework;
- Mitigate or prevent adverse impacts on communities caused by the Project operations;
- Serve as an early alert system to project management of significant or recurring issues that might signal a systemic problem, and facilitate a resolution; and
- Achieve improved service delivery in water and sewerage sector whereby citizens have strong ownerships, participation and get fair benefits from the sustainable utilization of such services.

Syed Salahuddin Ahmed
Project Director, KWSSIP

CC to:

1. Managing Director KW&SB
2. Director Investment KWSSIP, KW&SB
3. All Staff KWSSIP PIU

Copy for Kind Information to:

- Secretary Local Government Department, GoS.

Annex – IX

Screening Checklists

1	Sr. No.	1		
2	Project Description	**Bulk Water Supply Line** Diameter= 24" Material= Pre-stressed Reinforced Cement Concrete (PRCC) Depth= 7'-0" Repair= 1 Joint to be repaired	**Water Supply Distribution Network** Diameter= 6" Sluice Valve Material= Polyethylene (PE) Depth= 5'-6" Repair= Sluice valve needs to be changed	**Sewerage Line** No
3	Sector	Water	Water	Sewerage
4	Location/Address	**Shehzad Khalil Road**		
5	Coordinates	Latitutde	24'53.254"	
		Longitude	067'04.022"	
6	District	East		
7	Nearby Areas	Commercial, Residential		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No	No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No	No	
a	If Yes, Please Specify Number			
8.3	Any Nearby Water body?	No	No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes	Yes	
8.5	Disturbance to Existing Infrastructure?	Yes	Yes	
9	**Social Screening**			
9.1	Land Acquisition?	No	No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No	No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No	No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No	No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No	No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No	No	
a	If Yes, Please Specify			
9.7	Dislocation of People?	No	No	
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No	No	
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No	No	
a	If Yes, Please Specify			
9.12	Gender issues?	Yes	Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	The site is ok for execution.		
11	Pictures			






1	Sr. No.	2		
2	Project Description	**Bulk Water Supply Line** Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 1 joint to be repaired	**Water Supply Distribution Network**	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Jamalluddin Afghani Road**		
5	Coordinates	Latitutde	24'52.957"N	
		Longitude	067'04.807"E	
6	District	East		
7	Nearby Areas	Commercial, Residential		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	Minor Traffic issue. Site is clear for Execution.		
11	Pictures			



1	Sr. No.	3		
2	Project Description	**Bulk Water Supply Line** Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 2 to 3 joints to be repair	**Water Supply Distribution Network**	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Sharfabad Chowrangi at Jamalluddin Afghani Road**		
5	Coordinates	Latitutde	25'53.049"N	
		Longitude	067'03.878"E	
6	District	East		
7	Nearby Areas	Commercial, Residential		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	Minor traffic issues. Site is clear for execution		
11	Pictures			



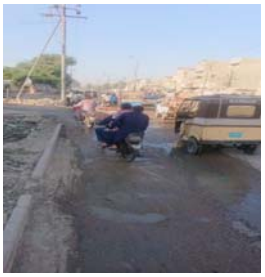



1	Sr. No.	4		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
				Diameter= 12" Material= RCC Depth= 3' to 5' + Dia Repair= 200'
3	Sector	Water	Water	Sewerage
4	Location/Address	**Shaheed-e-Millat Service Road, Right Side just before Tariq Road**		
5	Coordinates	Latitutde	24'52.786"N	
		Longitude	067'03.943"E	
6	District	East		
7	Nearby Areas	Commercial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			Yes
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			No
a	If Yes, Please Specify			
9.12	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues. Site is clear for execution		
11	Pictures			



1	Sr. No.	5		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
				Diameter= 12" Material= RCC Depth= 3' to 5' + Dia Repair= 50 Manhole covers
3	Sector	Water	Water	Sewerage
4	Location/Address	**Jahangir Road**		
5	Coordinates	Latitutde	24'53.254"N	
		Longitude	067'02.512"E	
6	District	East		
7	Nearby Areas	Commercial, Residential		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			No
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			Yes
a	If Yes, Please Specify			Mosque
9.12	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Site is clear for execution		
11	Pictures			






1	Sr. No.	6		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
		Bulk line 33 inches, depth 8ft , 5 joints will be repaired		
3	Sector	Water	Water	Sewerage
4	Location/Address	**Jail Road Infront of Jail Gate**		
5	Coordinates	Latitutde	24' 53.100"	
		Longitude	067' 03.576"	
6	District	East		
7	Nearby Areas	Commercial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues		
11	Pictures			






1	Sr. No.	7		
		Bulk Water Supply Line	**Water Supply Distribution Network**	**Sewerage**
2	Project Description			Diameter= 24" Material= RCC Depth= 7' to 8' Repair= 300'
3	Sector	Water	Water	Sewerage
4	Location/Address	**Shahrah-e-Qaideen Khudadad Colony (Mazar-e-Quaid Underpass)**		
5	Coordinates	Latitutde	24'52.273"	
		Longitude	067'02.745"	
6	District	East		
7	Nearby Areas	Commercial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			Yes
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			Yes
a	If Yes, Please Specify			Mosque
9.12	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	The sewer line is atleast 30ft away from the Business points.		
11	Pictures			






1	Sr. No.	8		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
		Bulk water supply 15 inch dia , 9 ft 3 inch depth , repair 3 joints in length of 7ft		
3	Sector	Water	Water	Sewerage
4	Location/Address	**Near FTC Flyover, Shahrah-e-Faisal**		
5	Coordinates	Latitutde	24'51.561"	
		Longitude	067'03.102"	
6	District	East		
7	Nearby Areas	Commercial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	No		
8.5	Disturbance to Existing Infrastructure?	Yes		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	No		
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues		
11	Pictures			



1	Sr. No.	9		
		Bulk Water Supply Line	**Water Supply Distribution Network**	**Sewerage**
2	Project Description			Diameter= 18 & 24"" Material= RCC Depth= 3' to 5' + Dia Repair= 2000' 18" & 2000' 24"
3	Sector	Water	Water	Sewerage
4	Location/Address	**11000 Road from 12000 Road to 14000 Road**		
5	Coordinates	Latitutde	24'49.545"	
		Longitude	067'09.497"	
6	District	Korangi		
7	Nearby Areas			Industrial
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			Yes
a	If Yes, Please Specify			10 saplings
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			No
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			Yes
a	If Yes, Please Specify			Saplings
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			Yes
a	If Yes, Please Specify			Mosque, School, Zoo
9.12	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues		
11	Pictures			





1	Sr. No.	10		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
				Diameter= 36" Type= RCC Depth= 10ft+Dia Repair= 250ft
3	Sector	Water	Water	Sewerage
4	Location/Address	**Jamia Millia Road After Malir 15**		
5	Coordinates	Latitutde	24'52.617"	
		Longitude	067"11.033"	
6	District	Korangi		
7	Nearby Areas			Commercial
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			Yes
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			No
a	If Yes, Please Specify			
9.12	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues		
11	Pictures			



1	Sr. No.	11		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
				Gate Valve Required
3	Sector	Water	Water	Sewerage
4	Location/Address	**Malir Halt Flyover**		
5	Coordinates	Latitutde	24'52.957"N	
		Longitude	067'10.591"	
6	District	Korangi		
7	Nearby Areas	Road under Flyover		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			No
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			Yes
a	If Yes, Please Specify			Mosque, School
9.12	Gender issues?			No
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues		
11	Pictures			




1	Sr. No.	12		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
			Diameter= 33" Material= PRCC Depth=7ft+dia Repair= 10 Joints & 300'	Diameter= 24" Material= RCC Depth= 10ft to 12ft+ Dia Repair= 1000'
3	Sector	Water	Water	Sewerage
4	Location/Address	**Under Korangi Flyover**		
5	Coordinates	Latitutde	24'49.788"	
		Longitude	067'09.836"	
6	District	Korangi		
7	Nearby Areas	Commercial, Residential		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	**Social Screening**			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	No
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource		Yes	Yes
a	If Yes, Please Specify		Hospital/Clinics, Edhi Center , Sports complex	Hospital/Clinics, Edhi Center , Sports complex
9.12	Gender issues?		Yes	Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues. Next to Edhi child home		
11	Pictures			




1	Sr. No.	13		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
		Bulk water dia 48 inches, Depth 10ft.		
3	Sector	Water	Water	Sewerage
4	Location/Address	**Zafar Town Road between Manzil Pump to Younus Chowrangi**		
5	Coordinates	Latitutde	24'51.052"	
		Longitude	067'13.700"	
6	District	Malir		
7	Nearby Areas	Industrial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	No		
8.5	Disturbance to Existing Infrastructure?	Yes		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	No		
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues		
11	Pictures			



1	Sr. No.	14		
		Bulk Water Supply Line	**Water Supply Distribution Network**	**Sewerage**
2	Project Description		Diameter 18"inches, Depth 4ft + Diameter, Repair 5500' length.	
3	Sector	Water	Water	Sewerage
4	Location/Address	**Near Gulshan-e-Kaneez Fatima**		
5	Coordinates	Latitutde	24' 57.424"	
		Longitude	067'07.270"	
6	District	Malir		
7	Nearby Areas	Commercial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	**Social Screening**			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.11	Physical Cultural Resource		No	
a	If Yes, Please Specify			
9.12	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues		
11	Pictures			

1	Sr. No.	15		
2	Project Description	**Bulk Water Supply Line** Diameter= 54" Material= PRCC Depth= 8ft+Dia Repair= 50ft	**Water Supply Distribution Network**	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Saba Cinema To Jamali Bridge**		
5	Coordinates	Latitutde	24' 59.209"	
		Longitude	067' 05.209"	
6	District	Malir		
7	Nearby Areas	Industrial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	Yes		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	Yes		
a	If Yes, Please Specify	Layari River		
b	Approximate distance from subproject Site:	100 m		
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	Yes		
a	If Yes, Please Specify	Mosque		
9.12	Gender issues?	No		
a	If Yes, Please Specify			
10	Any Further Observation:	Site is clear for execution.		
11	Pictures			




1	Sr. No.	16		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network**	**Sewerage**
				Diameter= 36" Material= RCC Depth= 15ft+Dia Repair= 8350'
3	Sector	Water	Water	Sewerage
4	Location/Address	**Road 7000 (Godra)**		
5	Coordinates	Latitutde	24' 57.821"	
		Longitude	067'0.4755"	
6	District	Central		
7	Nearby Areas			Commercial, Residential
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			Yes
a	If Yes, Please Specify			Wastewater Drain
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			Yes
8.5	Disturbance to Existing Infrastructure?			No
9	**Social Screening**			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.11	Physical Cultural Resource			Yes
a	If Yes, Please Specify			Mosque, Jamia Masjid Khursheeedi
9.12	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues. No social issues.		
11	Pictures			



1	Sr. No.	17		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network** Diameter= 12" Material= PE Depth= 5ft+Dia Repair= 4000+2500 Rft	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**6000 Road (Yousaf Goth Allahwali)**		
5	Coordinates	Latitutde	25' 00.422"	
		Longitude	67' 04.556"	
6	District	Central		
7	Nearby Areas		Commercial, Residential	
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		No	
9	**Social Screening**			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.11	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque, Imam Bargah	
9.12	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No social issues. Existing Conditions of sewer is vulnerable. Traffic issues expected		
11	Pictures			



1	Sr. No.	18		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network** Diameter= 18",6" Material= AC Depth= 6ft+Dia Repair= 25ft, 250ft	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Mukka Chowk**		
5	Coordinates	Latitutde	24'55.417"	
		Longitude	067'04.089"	
6	District	Central		
7	Nearby Areas	Commercial, Residential		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		No	
9	**Social Screening**			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.11	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque, School	
9.12	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues		
11	Pictures			




1	Sr. No.	19		
2	Project Description	**Bulk Water Supply Line** Diameter= 24" Material= Not Known Depth= 8ft+Dia Repair= 10 ft & 2 Joints	**Water Supply Distribution Network**	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Nairan Cinema**		
5	Coordinates	Latitutde	24'54.255	
		Longitude	067'02.812	
6	District	East		
7	Nearby Areas	Commercial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues. Site is clear for execution.		
11	Pictures			



1	Sr. No.	20		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network** Diameter= 4",6" Material= AC, CI Depth= 5ft+Dia Repair= 5ft, 5ft	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Katti parhari**		
5	Coordinates	Latitutde	24'56.563"	
		Longitude	067'02.047	
6	District	Central		
7	Nearby Areas		Residential	
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		No	
9	**Social Screening**			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.11	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque, School, Madrassa	
9.12	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	Traffic Issues. No social issues		
11	Pictures			



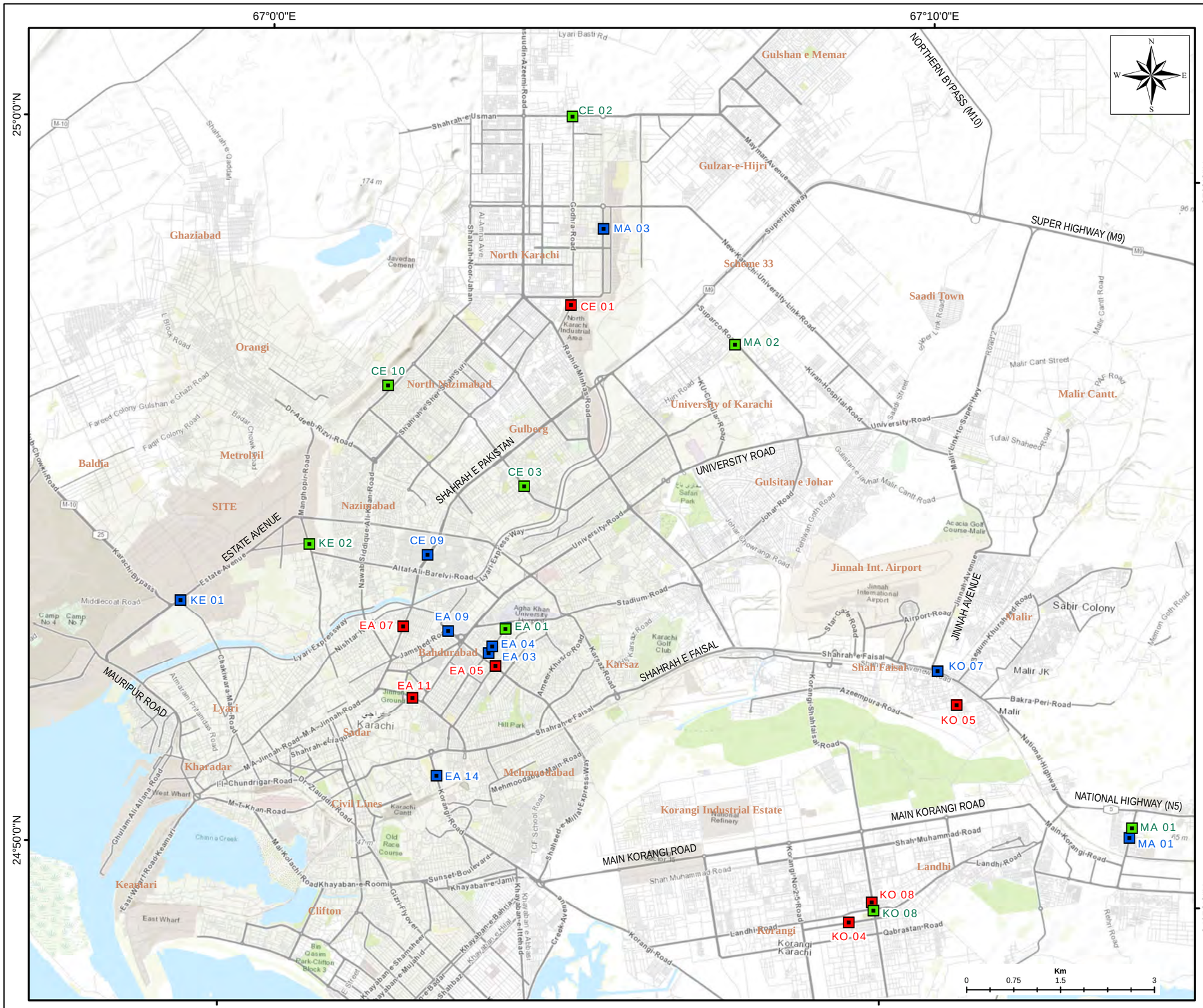
1	Sr. No.	21		
2	Project Description	**Bulk Water Supply Line** Diameter= 24" Material= Nill Depth= 10ft+Dia Repair= 10ft to 15ft	**Water Supply Distribution Network**	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Shershah Roundabout**		
5	Coordinates	Latitutde	24'54.429"	
		Longitude	066'59.099"	
6	District	Keamari		
7	Nearby Areas	Industrial		
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	Yes		
a	If Yes, Please Specify	Waste water Drain		
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	**Social Screening**			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.11	Physical Cultural Resource	No		
a	If Yes, Please Specify			
9.12	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	Industrial area heavy Traffic Issues.		
11	Pictures			




1	Sr. No.	22		
2	Project Description	**Bulk Water Supply Line**	**Water Supply Distribution Network** Diameter= 12", 18" Material= PE Depth= 7-8ft (Invert) Repair= 150ft to 200ft	**Sewerage**
3	Sector	Water	Water	Sewerage
4	Location/Address	**Nouros Chowrangi**		
5	Coordinates	Latitutde	24'54.322"	
		Longitude	067'01.003"	
6	District	Keamari		
7	Nearby Areas		Industrial	
8	**Environmental Screening**			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		No	
8.5	Disturbance to Existing Infrastructure?		No	
9	**Social Screening**			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.1	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.11	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque	
9.12	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	The line is on the service road so there is no issue of Traffic or no social issue.		
11	Pictures			

Annex – X

Location Maps



Repair Work Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

ABBREVIATIONS: (DISTRICT WISE)

CE = CENTRAL	MA = MALIR
EA = EAST	SO = SOUTH
KE = KEAMARI	WE = WEST
KO = KORANGI	

NOTE:

1.THESE LOCATIONS ARE REPRESENTATIVE POINTS (START,END OR ANY OTHER REFERENCE) TO REACH AT THE SITE. EXACT LOCATION OF REPAIR WORKS WILL BE IDENTIFIED BY THE CONCERNED OFFICIALS OF KW&SB

2. FOR LAYOUT & ATTRIBUTE DATA PERTAINING TO REPAIR WORKS, REFER TO DRAWING NO 4321/11/TD/LM02

CLIENT:
KWSSIP
PIU-KWSSIP, KW&SB

CONSULTANT:
NESPAK
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

	DRWAN	ATHAR
	SUBMITTED	
	RECOMMENDED	
	CHD./VER.	
	APPROVED	

PROJECT:
REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

TENTATIVE LOCATION PLAN OF REPAIR WORKS

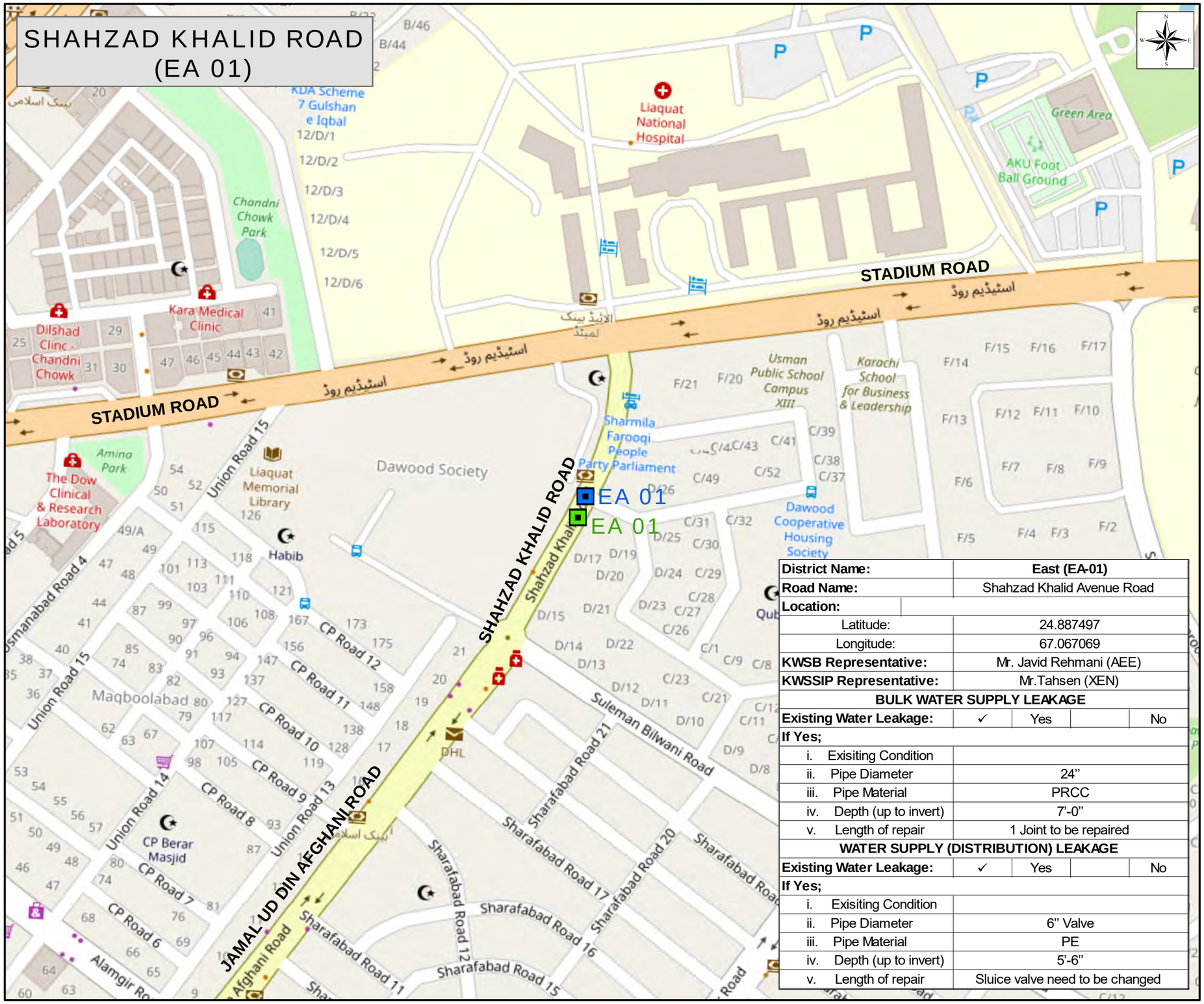
SCALE: 1:100,000

DATE: OCT., 2022

DRAWING NO: 4321/11/TD/LM01

REV.

SHAHZAD KHALID ROAD (EA 01)



District Name:	**East (EA-01)**			
Road Name:	Shahzad Khalid Avenue Road			
Location:				
Latitude:	24.887497			
Longitude:	67.067069			
KWSB Representative:	Mr. Javid Rehmani (AEE)			
KWSSIP Representative:	Mr.Tahsen (XEN)			
BULK WATER SUPPLY LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	24"			
iii. Pipe Material	PRCC			
iv. Depth (up to invert)	7'-0"			
v. Length of repair	1 Joint to be repaired			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	6" Valve			
iii. Pipe Material	PE			
iv. Depth (up to invert)	5'-6"			
v. Length of repair	Sluice valve need to be changed			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters
0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS
SHEET 01 OF 22

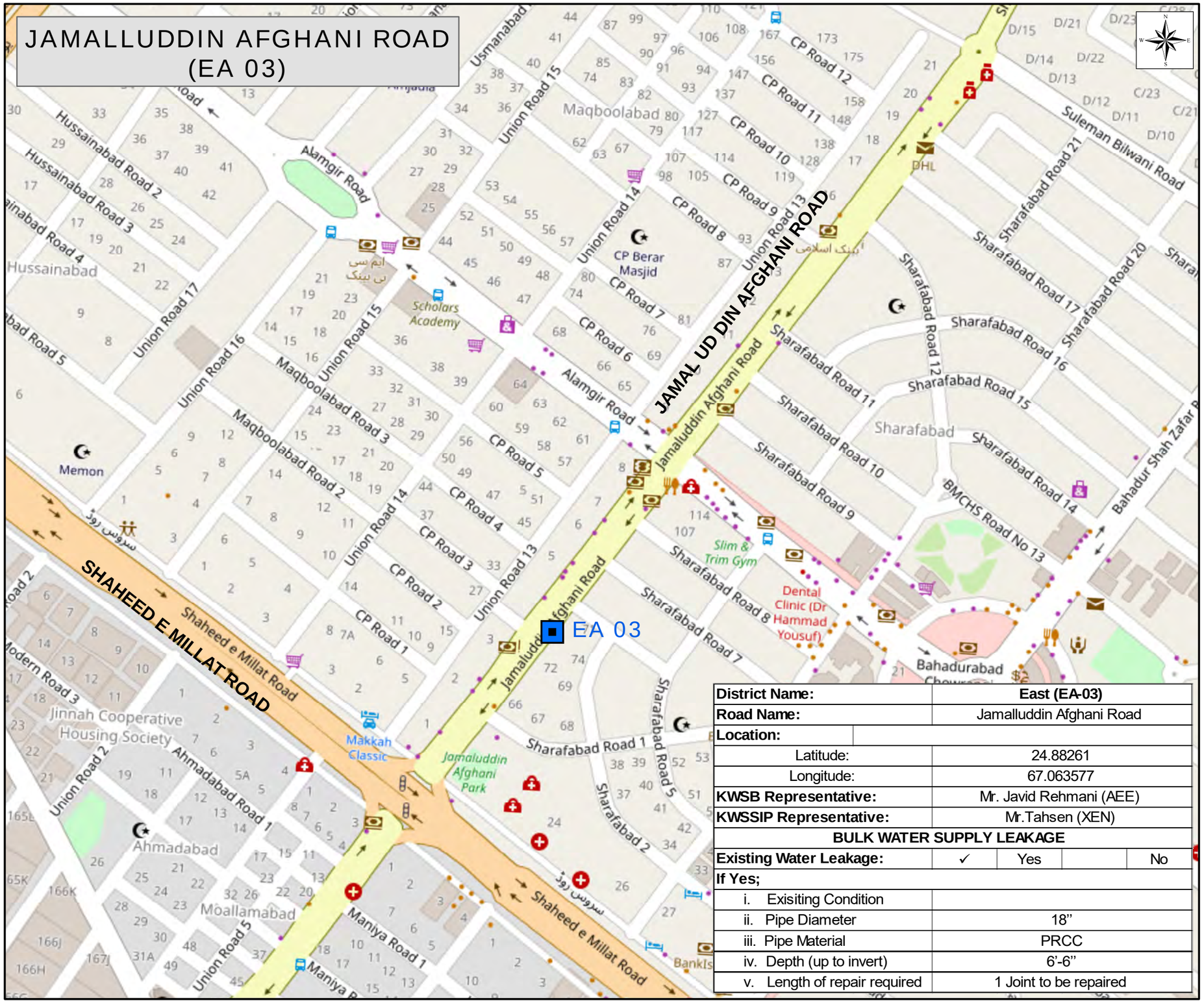
SCALE 1:3,500

DATE OCTOBER, 2022

DRAWING NO 4321/11/TD/LM02

REV.

JAMALLUDDIN AFGHANI ROAD (EA 03)



District Name:	**East (EA-03)**
Road Name:	Jamalluddin Afghani Road
Location:	
Latitude:	24.88261
Longitude:	67.063577
KWSB Representative:	Mr. Javid Rehmani (AEE)
KWSSIP Representative:	Mr.Tahsen (XEN)
BULK WATER SUPPLY LEAKAGE	
Existing Water Leakage:	✓ Yes / No
If Yes;	
i. Exisiting Condition	
ii. Pipe Diameter	18"
iii. Pipe Material	PRCC
iv. Depth (up to invert)	6'-6"
v. Length of repair required	1 Joint to be repaired

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters 0 50 100 200

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.				DRWN: ATHAR; SUBMITTED; RECOMMENDED; CHD./VER.; APPROVED
		REV.	DATE	DESCRIPTION	APPROVED

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

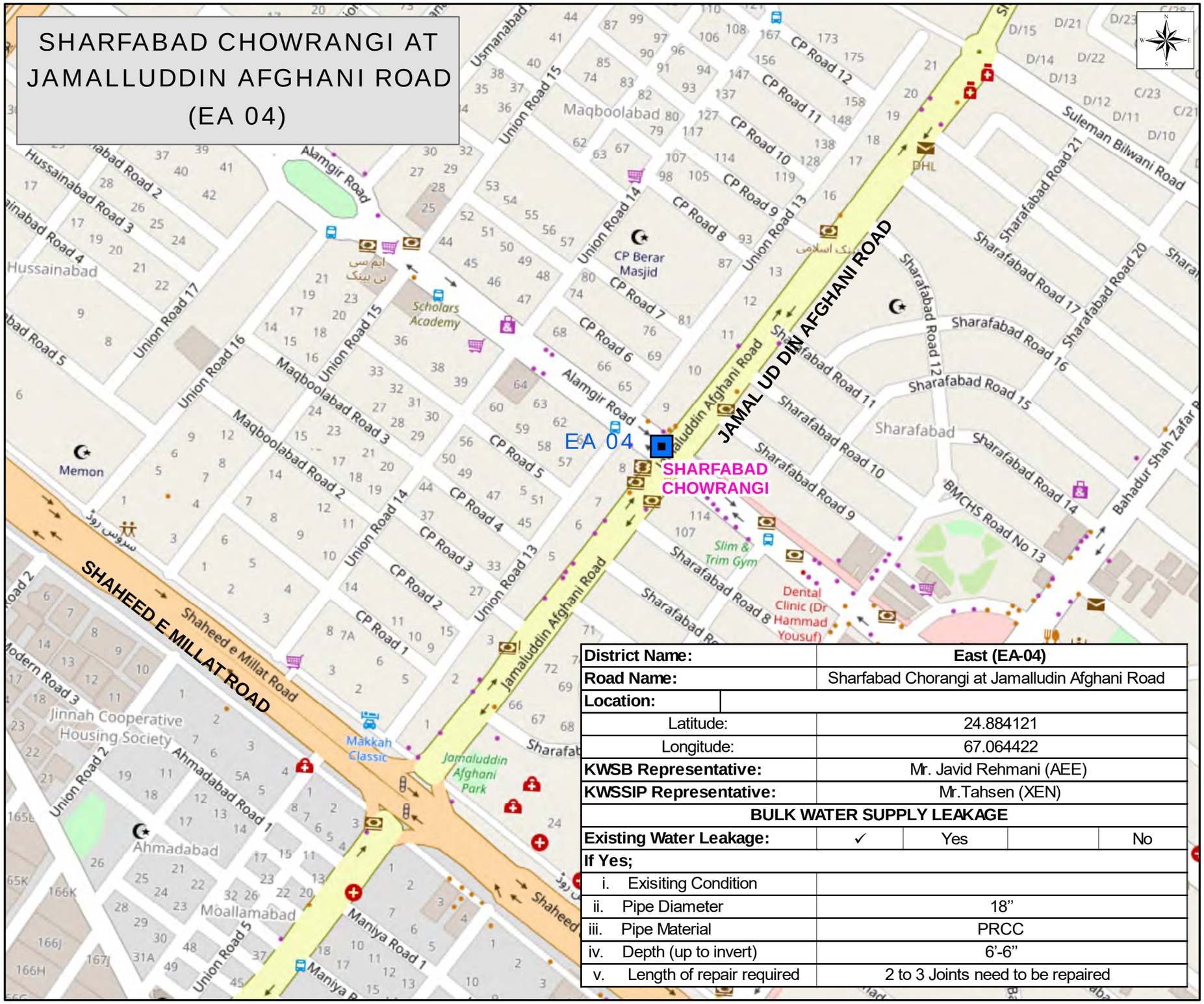
LOCATION / LAYOUT OF REPAIR WORKS

SHEET 02 OF 22

SCALE 1:3,500

DATE: OCTOBER, 2022 | DRAWING NO: 4321/11/TD/LM02 | REV.

SHARFABAD CHOWRANGI AT JAMALLUDDIN AFGHANI ROAD (EA 04)



District Name:	**East (EA-04)**			
Road Name:	Sharfabad Chorangi at Jamalludin Afghani Road			
Location:				
Latitude:	24.884121			
Longitude:	67.064422			
KWSB Representative:	Mr. Javid Rehmani (AEE)			
KWSSIP Representative:	Mr.Tahsen (XEN)			
BULK WATER SUPPLY LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	18”			
iii. Pipe Material	PRCC			
iv. Depth (up to invert)	6’-6”			
v. Length of repair required	2 to 3 Joints need to be repaired			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters 0 50 100 200

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

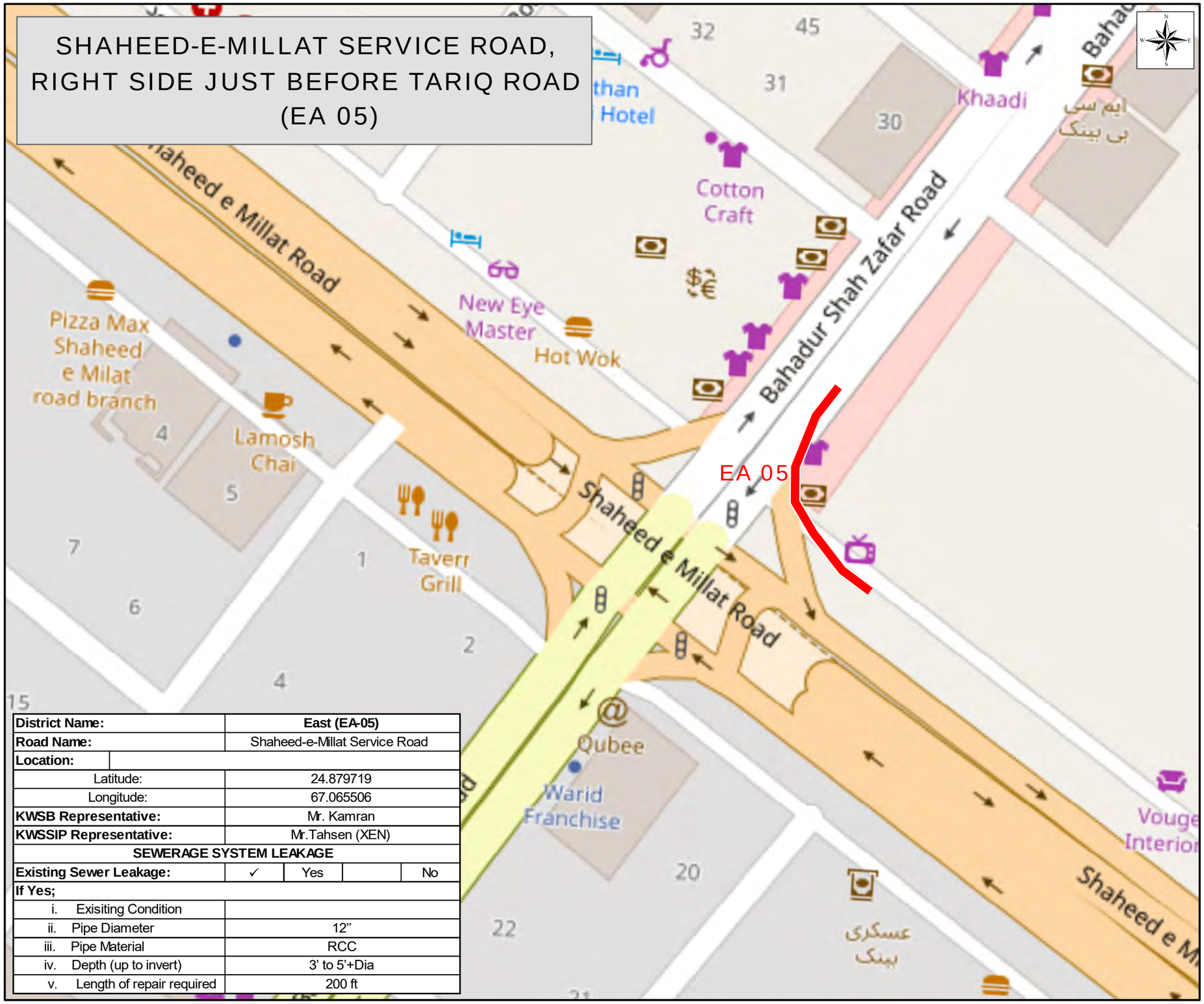
LOCATION / LAYOUT OF REPAIR WORKS

SHEET 03 OF 22

SCALE 1:3,500

DATE OCTOBER, 2022 | DRAWING NO 4321/11/TD/LM02 | REV.

SHAHEED-E-MILLAT SERVICE ROAD, RIGHT SIDE JUST BEFORE TARIQ ROAD (EA 05)



District Name:	**East (EA-05)**			
Road Name:	Shaheed-e-Millat Service Road			
Location:				
Latitude:	24.879719			
Longitude:	67.065506			
KWSB Representative:	Mr. Kamran			
KWSSIP Representative:	Mr.Tahsen (XEN)			
SEWERAGE SYSTEM LEAKAGE				
Existing Sewer Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	12"			
iii. Pipe Material	RCC			
iv. Depth (up to invert)	3' to 5'+Dia			
v. Length of repair required	200 ft			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 15 30 60

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 04 OF 22

SCALE: 1:1,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

JAHANGIR ROAD (EA 07)

District Name:	**East (EA-07)**			
Road Name:	Jahangir Road			
Location:				
Latitude:	24.887565			
Longitude:	67.041711			
KWSB Representative:	Mr. Ali Asghar (AEE)			
KWSSIP Representative:	Mr.Tahsen (XEN)			
SEWERAGE SYSTEM LEAKAGE				
Existing Sewer Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	12”			
iii. Pipe Material	RCC			
iv. Depth (up to invert)	3' to 5' + Dia			
v. Length of repair required	50 Manhole cover			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 25 50 100

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 05 OF 22

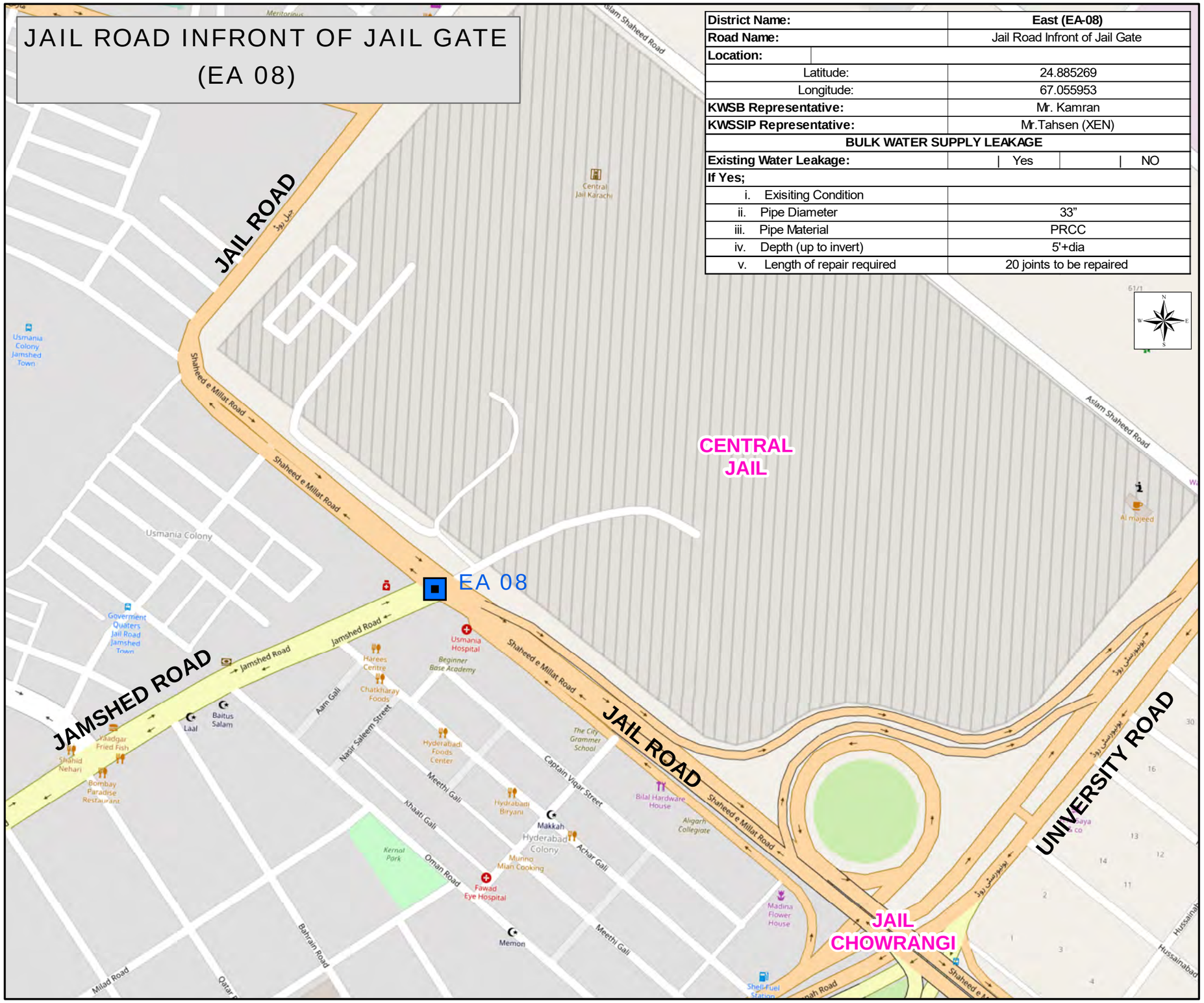
SCALE: 1:2,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

JAIL ROAD INFRONT OF JAIL GATE (EA 08)



District Name:	**East (EA-08)**
Road Name:	Jail Road Infront of Jail Gate
Location:	
Latitude:	24.885269
Longitude:	67.055953
KWSB Representative:	Mr. Kamran
KWSSIP Representative:	Mr.Tahsen (XEN)
BULK WATER SUPPLY LEAKAGE	
Existing Water Leakage:	Yes / NO
If Yes;	
i. Exisiting Condition	
ii. Pipe Diameter	33”
iii. Pipe Material	PRCC
iv. Depth (up to invert)	5'+dia
v. Length of repair required	20 joints to be repaired

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR	
SUBMITTED		
RECOMMENDED		
CHD./VER.		
APPROVED		

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 06 OF 22

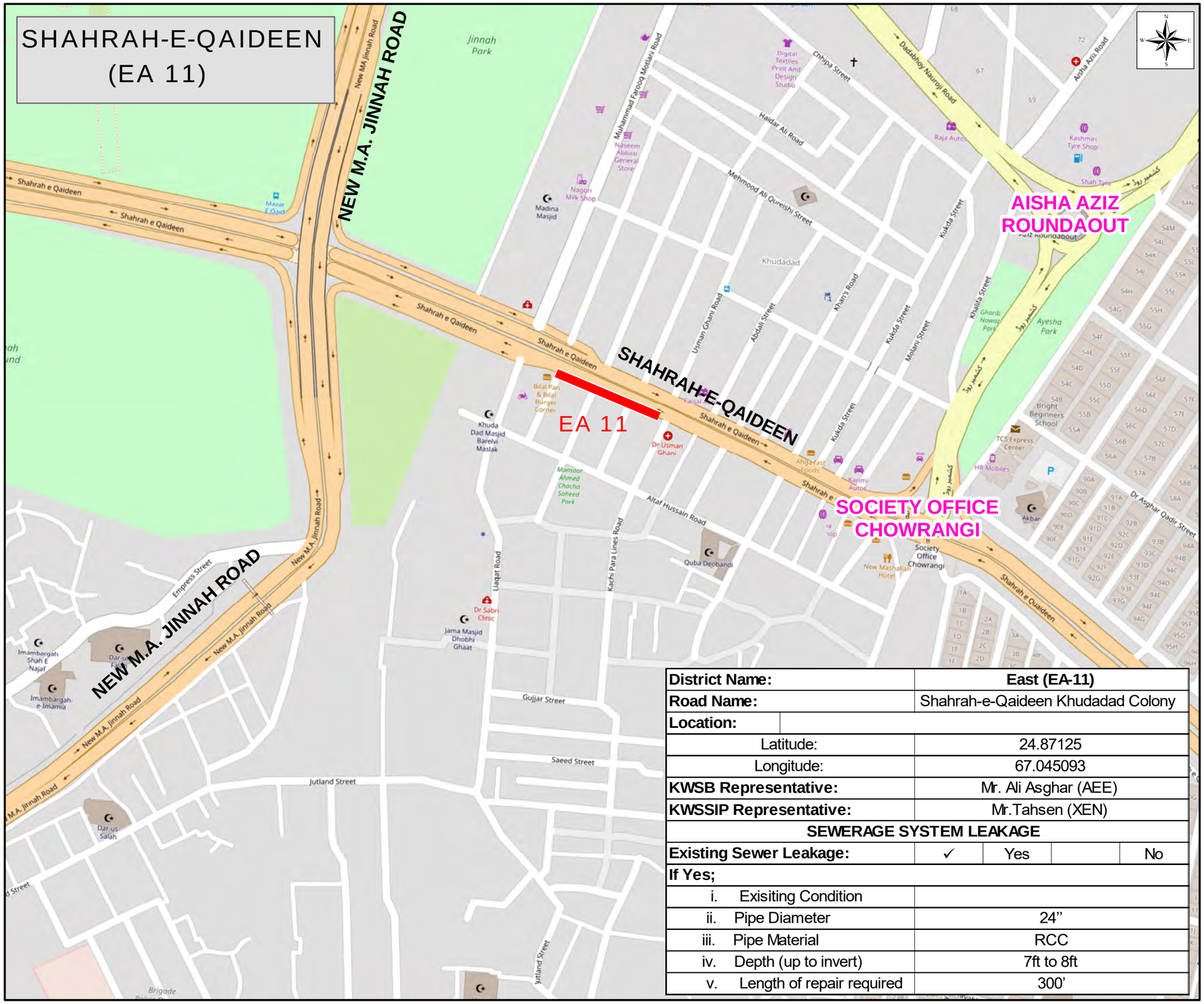
SCALE: 1:3,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

SHAHRAH-E-QAIDEEN
(EA 11)



District Name:	**East (EA-11)**			
Road Name:	Shahrah-e-Qaideen Khudadad Colony			
Location:				
Latitude:	24.87125			
Longitude:	67.045093			
KWSB Representative:	Mr. Ali Asghar (AEE)			
KWSSIP Representative:	Mr.Tahsen (XEN)			
SEWERAGE SYSTEM LEAKAGE				
Existing Sewer Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	24”			
iii. Pipe Material	RCC			
iv. Depth (up to invert)	7ft to 8ft			
v. Length of repair required	300’			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 07 OF 22

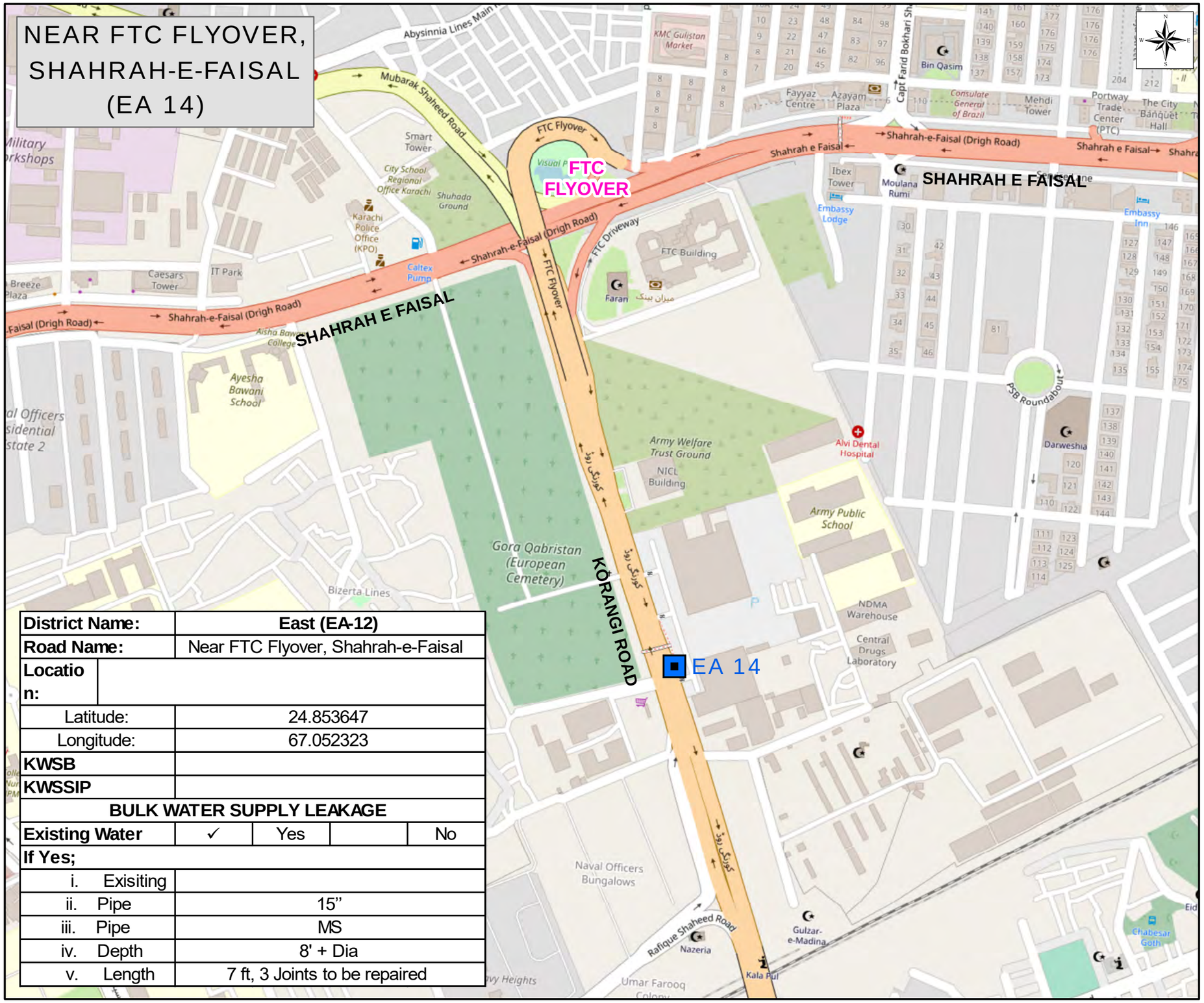
SCALE: 1:3,300

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

NEAR FTC FLYOVER, SHAHRAH-E-FAISAL (EA 14)



District Name:	**East (EA-12)**			
Road Name:	Near FTC Flyover, Shahrah-e-Faisal			
Location:				
Latitude:	24.853647			
Longitude:	67.052323			
KWSB				
KWSSIP				
BULK WATER SUPPLY LEAKAGE				
Existing Water	✓	Yes		No
If Yes;				
i. Exisiting				
ii. Pipe	15”			
iii. Pipe	MS			
iv. Depth	8' + Dia			
v. Length	7 ft, 3 Joints to be repaired			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 100 200 400

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 08 OF 22

SCALE: 1:5,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

11000 ROAD FROM 12000 ROAD TO 14000 ROAD (KO 04)

District Name:	**Korangi (KO-04)**			
Road Name:	11000 Road from 12000 Road to 14000 Road			
Location:				
Latitude:	24.825536			
Longitude:	67.158264			
KWSB Representative:				
KWSSIP Representative:				
SEWERAGE SYSTEM LEAKAGE				
Existing Sewer Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	18" & 24"			
iii. Pipe Material	RCC			
iv. Depth (up to invert)	3' To 5' + Dia			
v. Length of repair	2000' (18") & 2000' (24")			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 09 OF 22

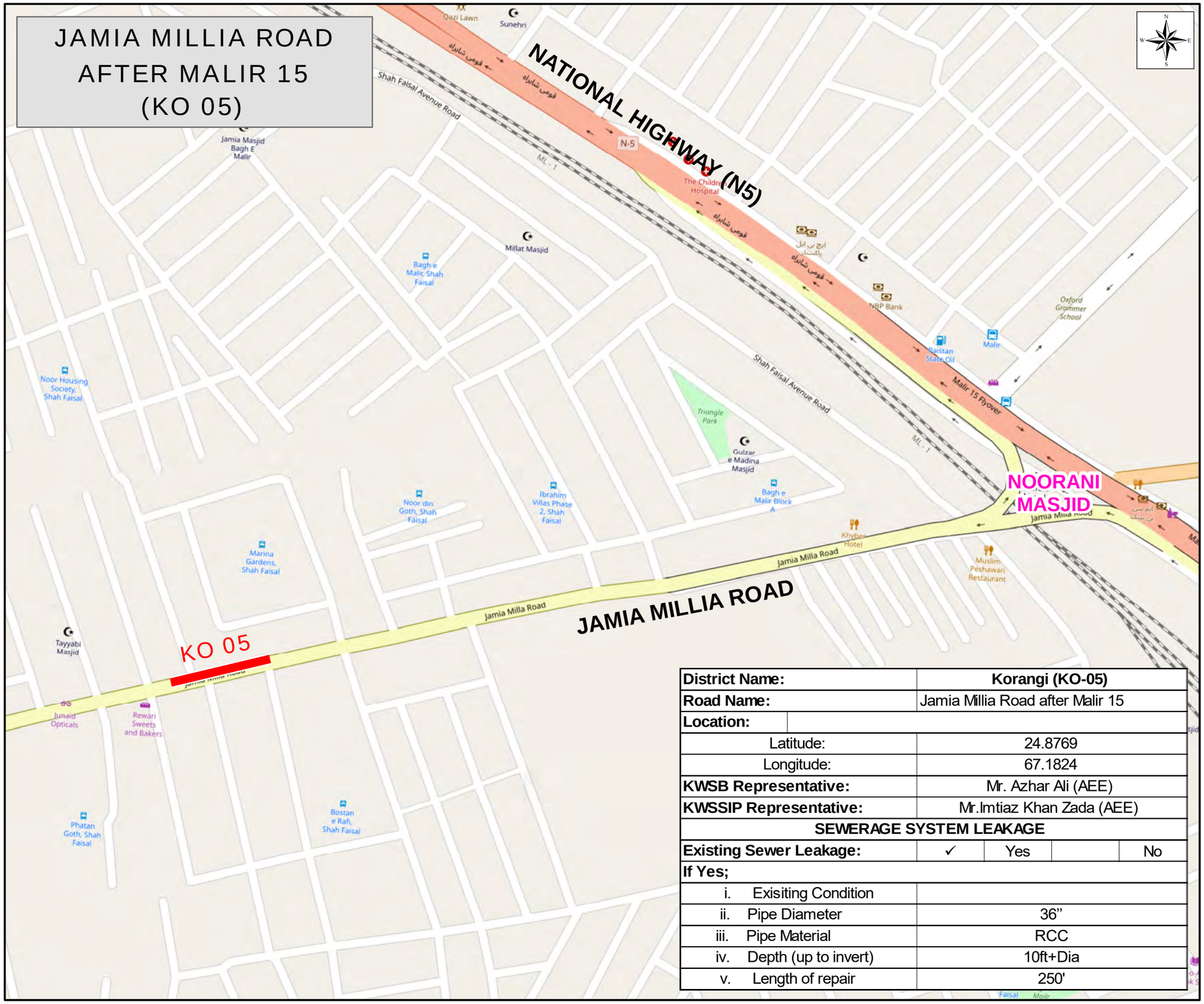
SCALE: 1:2,500

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

JAMIA MILLIA ROAD AFTER MALIR 15 (KO 05)



District Name:	**Korangi (KO-05)**
Road Name:	Jamia Millia Road after Malir 15
Location:	
Latitude:	24.8769
Longitude:	67.1824
KWSB Representative:	Mr. Azhar Ali (AEE)
KWSSIP Representative:	Mr.Imtiaz Khan Zada (AEE)
SEWERAGE SYSTEM LEAKAGE	
Existing Sewer Leakage:	✓ Yes / No
If Yes;	
i. Exisiting Condition	
ii. Pipe Diameter	36”
iii. Pipe Material	RCC
iv. Depth (up to invert)	10ft+Dia
v. Length of repair	250'

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 10 OF 22

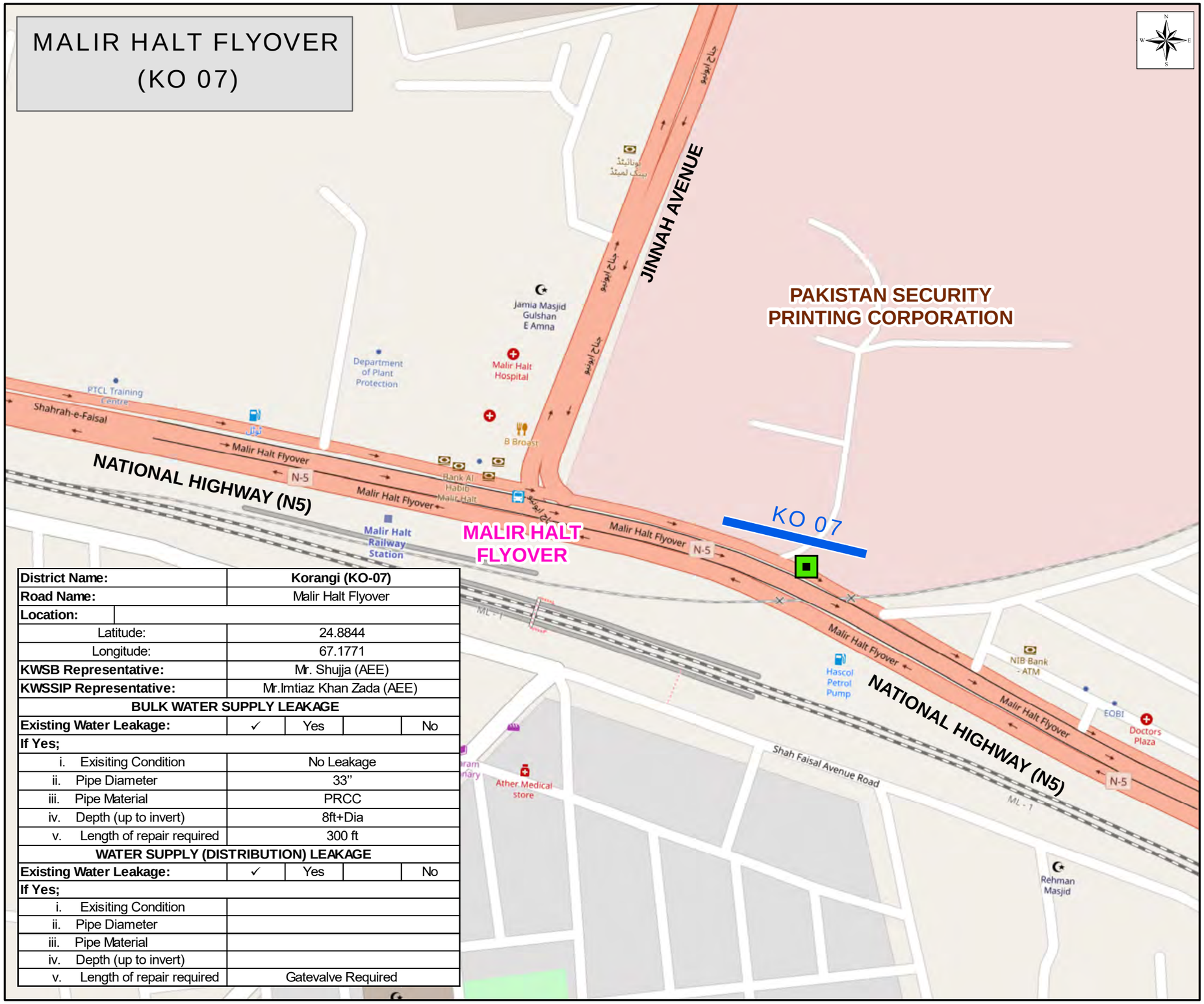
SCALE: 1:3,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

MALIR HALT FLYOVER (KO 07)



District Name:	**Korangi (KO-07)**			
Road Name:	Malir Halt Flyover			
Location:				
Latitude:	24.8844			
Longitude:	67.1771			
KWSB Representative:	Mr. Shujja (AEE)			
KWSSIP Representative:	Mr.Imtiaz Khan Zada (AEE)			
BULK WATER SUPPLY LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition	No Leakage			
ii. Pipe Diameter	33”			
iii. Pipe Material	PRCC			
iv. Depth (up to invert)	8ft+Dia			
v. Length of repair required	300 ft			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter				
iii. Pipe Material				
iv. Depth (up to invert)				
v. Length of repair required	Gatevalve Required			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 11 OF 22

SCALE: 1:2,500

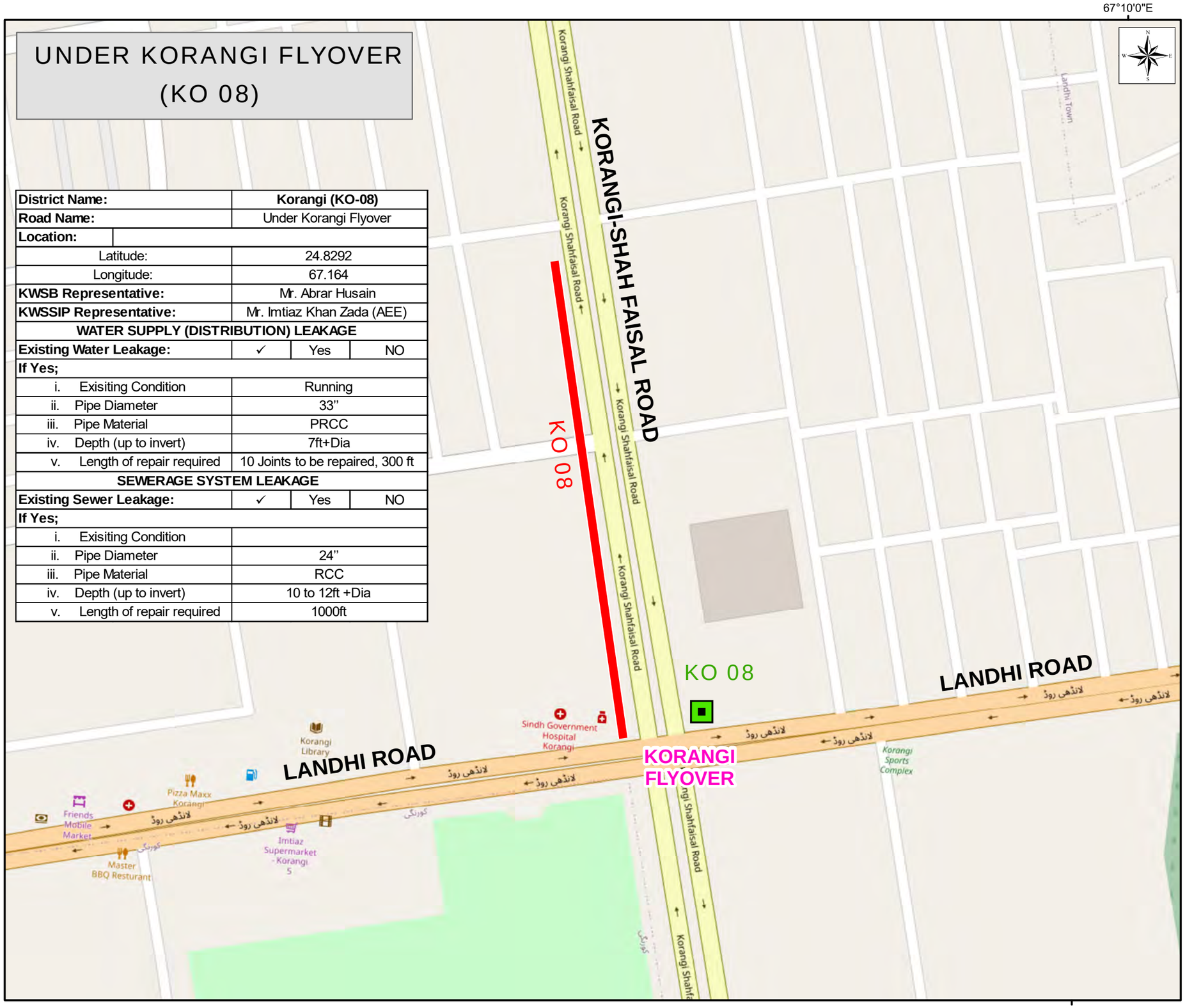
DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

UNDER KORANGI FLYOVER (KO 08)

District Name:	**Korangi (KO-08)**		
Road Name:	Under Korangi Flyover		
Location:			
Latitude:	24.8292		
Longitude:	67.164		
KWSB Representative:	Mr. Abrar Husain		
KWSSIP Representative:	Mr. Imtiaz Khan Zada (AEE)		
WATER SUPPLY (DISTRIBUTION) LEAKAGE			
Existing Water Leakage:	✓	Yes	NO
If Yes;			
i. Exisiting Condition	Running		
ii. Pipe Diameter	33"		
iii. Pipe Material	PRCC		
iv. Depth (up to invert)	7ft+Dia		
v. Length of repair required	10 Joints to be repaired, 300 ft		
SEWERAGE SYSTEM LEAKAGE			
Existing Sewer Leakage:	✓	Yes	NO
If Yes;			
i. Exisiting Condition			
ii. Pipe Diameter	24"		
iii. Pipe Material	RCC		
iv. Depth (up to invert)	10 to 12ft +Dia		
v. Length of repair required	1000ft		



Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD — HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.				DRWN	ATHAR
					SUBMITTED	
					RECOMMENDED	
					CHD./VER.	
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED

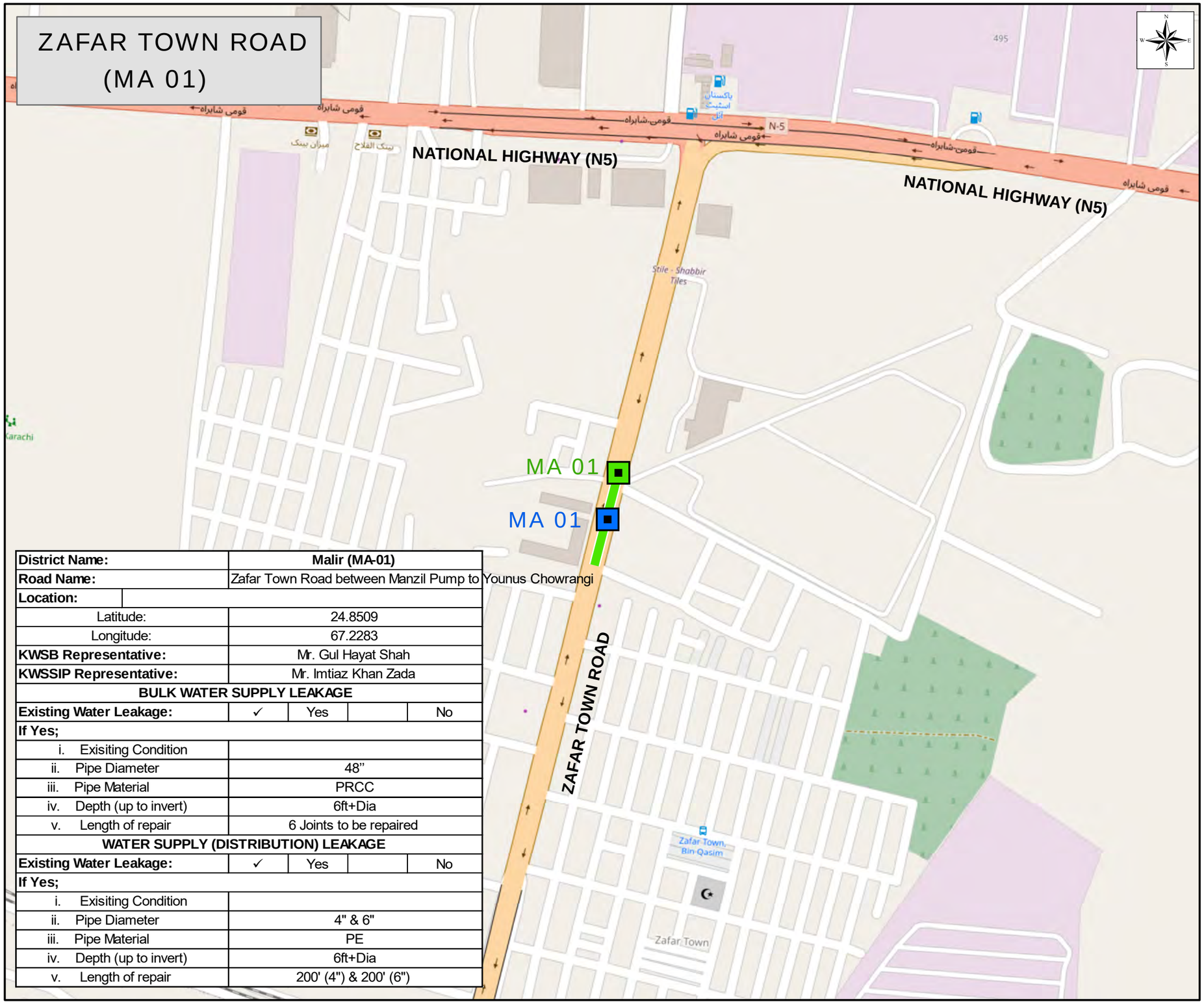
PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 12 OF 22

SCALE	DATE	DRAWING NO	REV.
1:2,500	OCTOBER, 2022	4321/11/TD/LM02	

ZAFAR TOWN ROAD (MA 01)



District Name:	**Malir (MA-01)**			
Road Name:	Zafar Town Road between Manzil Pump to Younus Chowrangi			
Location:				
Latitude:	24.8509			
Longitude:	67.2283			
KWSB Representative:	Mr. Gul Hayat Shah			
KWSSIP Representative:	Mr. Imtiaz Khan Zada			
BULK WATER SUPPLY LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	48”			
iii. Pipe Material	PRCC			
iv. Depth (up to invert)	6ft+Dia			
v. Length of repair	6 Joints to be repaired			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	4" & 6"			
iii. Pipe Material	PE			
iv. Depth (up to invert)	6ft+Dia			
v. Length of repair	200' (4") & 200' (6")			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 75 150 300

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 13 OF 22

SCALE: 1:5,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

NEAR GULSHAN-E-KANEEZ FATIMA
(MA 02)

District Name:	**Malir (MA-02)**			
Road Name:	Near Gulshan-e-Kaneez Fatima			
Location:				
Latitude:	24.9567			
Longitude:	67.1212			
KWSB Representative:	Mr. Imran (AEE)			
KWSSIP Representative:	Mr. Imtiaz Khan Zada			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition	Running			
ii. Pipe Diameter	18"			
iii. Pipe Material	PRCC			
iv. Depth (up to invert)	4ft+Dia			
v. Length of repair	5500'			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200 300 400

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB	CONSULTANT: NES PAK — NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD; HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.					DRWN	ATHAR
						SUBMITTED	
						RECOMMENDED	
						CHD./VER.	
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

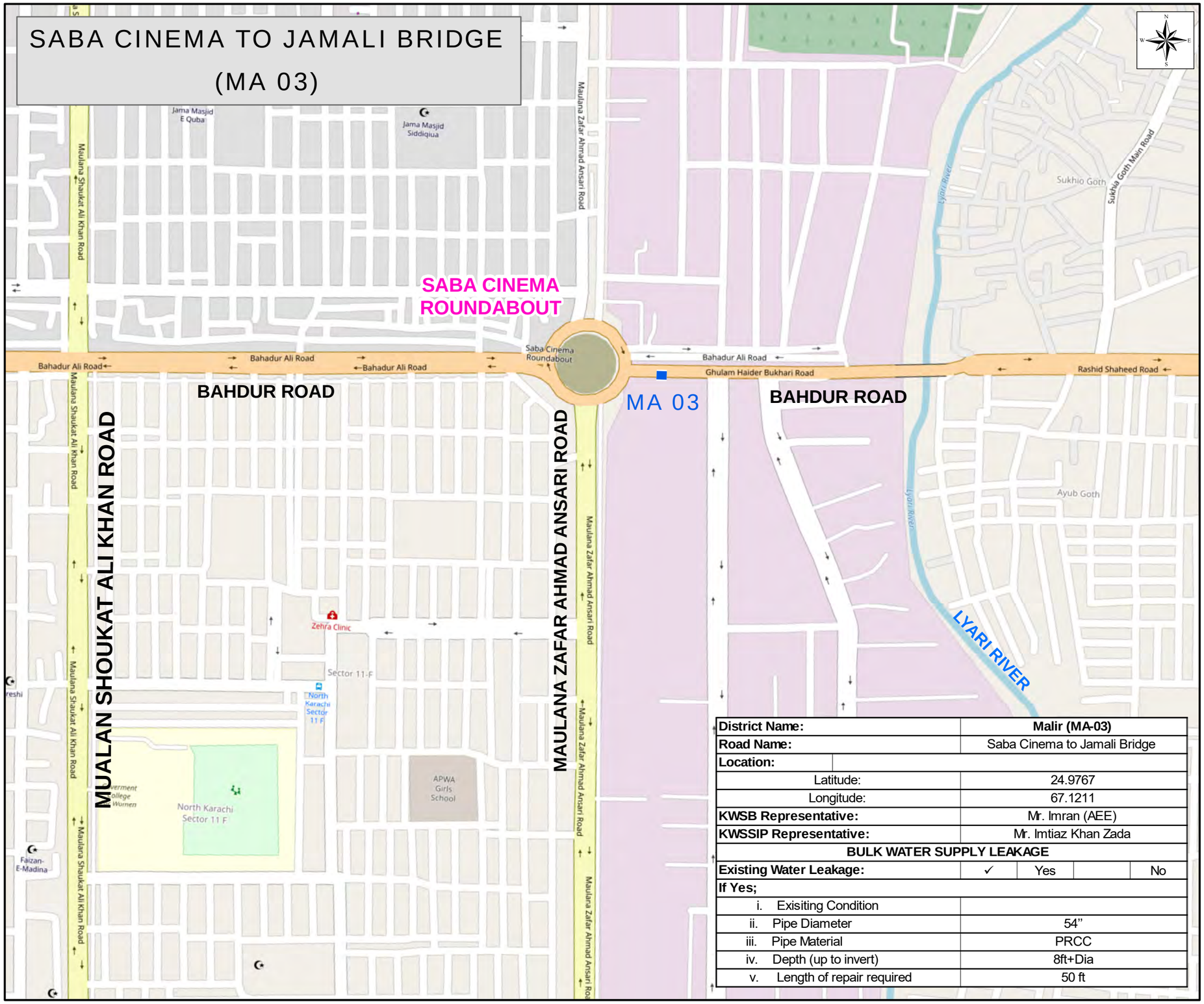
LOCATION / LAYOUT OF REPAIR WORKS

SHEET 14 OF 22

SCALE: 1:5,500

DATE: OCTOBER, 2022 | DRAWING NO: 4321/11/TD/LM02 | REV.

SABA CINEMA TO JAMALI BRIDGE
(MA 03)



District Name:	**Malir (MA-03)**				
Road Name:	Saba Cinema to Jamali Bridge				
Location:					
Latitude:	24.9767				
Longitude:	67.1211				
KWSB Representative:	Mr. Imran (AEE)				
KWSSIP Representative:	Mr. Imtiaz Khan Zada				
BULK WATER SUPPLY LEAKAGE					
Existing Water Leakage:	✓	Yes		No	
If Yes;					
i. Exisiting Condition					
ii. Pipe Diameter	54”				
iii. Pipe Material	PRCC				
iv. Depth (up to invert)	8ft+Dia				
v. Length of repair required	50 ft				

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Km: 0 0.05 0.1 0.2

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD — HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.					DRWAN	ATHAR
						SUBMITTED	
						RECOMMENDED	
						CHD./VER.	
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

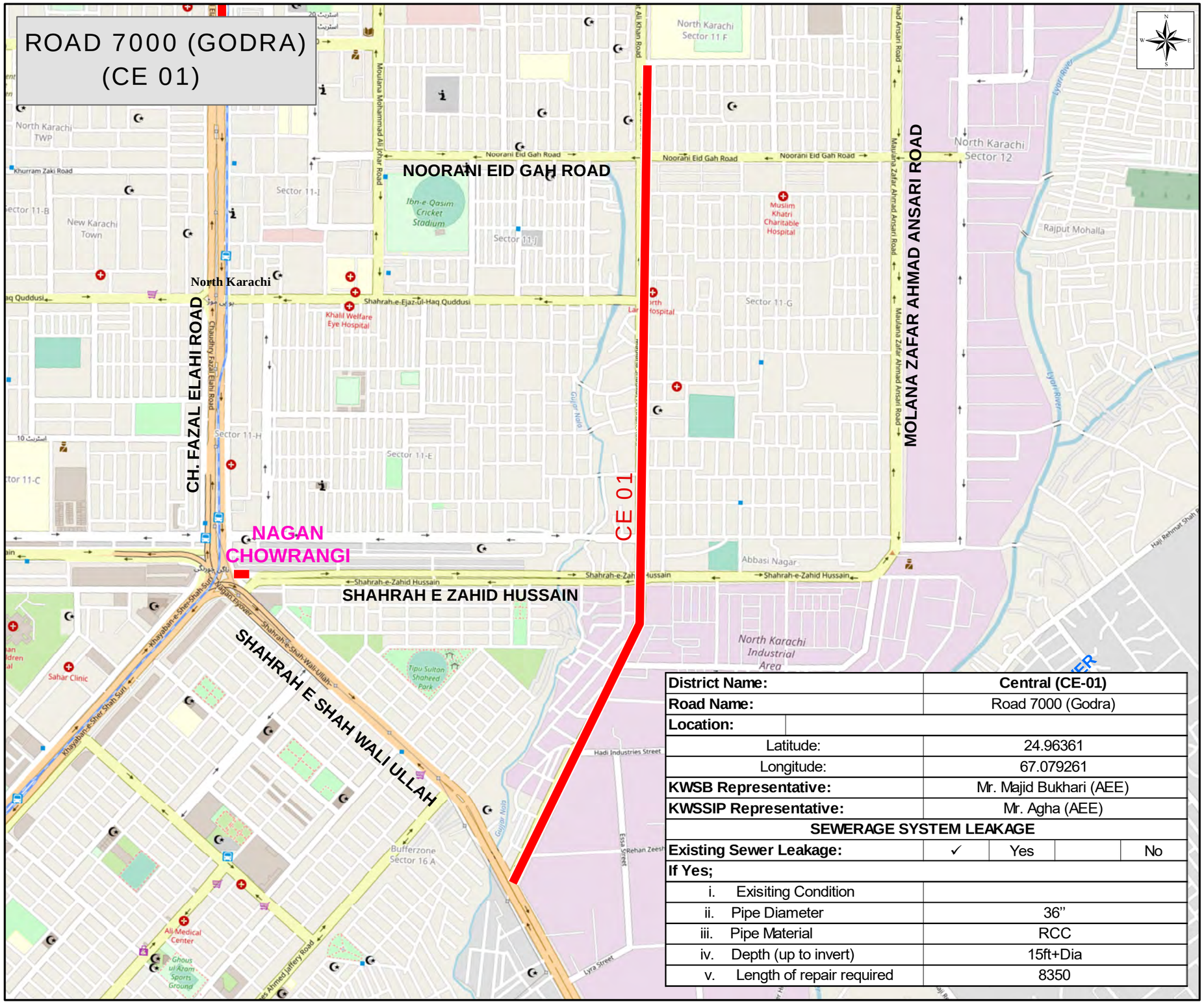
PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 15 OF 22

SCALE	DATE	DRAWING NO	REV.
1:6,050	OCTOBER, 2022	4321/11/TD/LM02	

ROAD 7000 (GODRA) (CE 01)



District Name:	**Central (CE-01)**			
Road Name:	Road 7000 (Godra)			
Location:				
Latitude:	24.96361			
Longitude:	67.079261			
KWSB Representative:	Mr. Majid Bukhari (AEE)			
KWSSIP Representative:	Mr. Agha (AEE)			
SEWERAGE SYSTEM LEAKAGE				
Existing Sewer Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	36”			
iii. Pipe Material	RCC			
iv. Depth (up to invert)	15ft+Dia			
v. Length of repair required	8350			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 200 400 800

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 16 OF 22

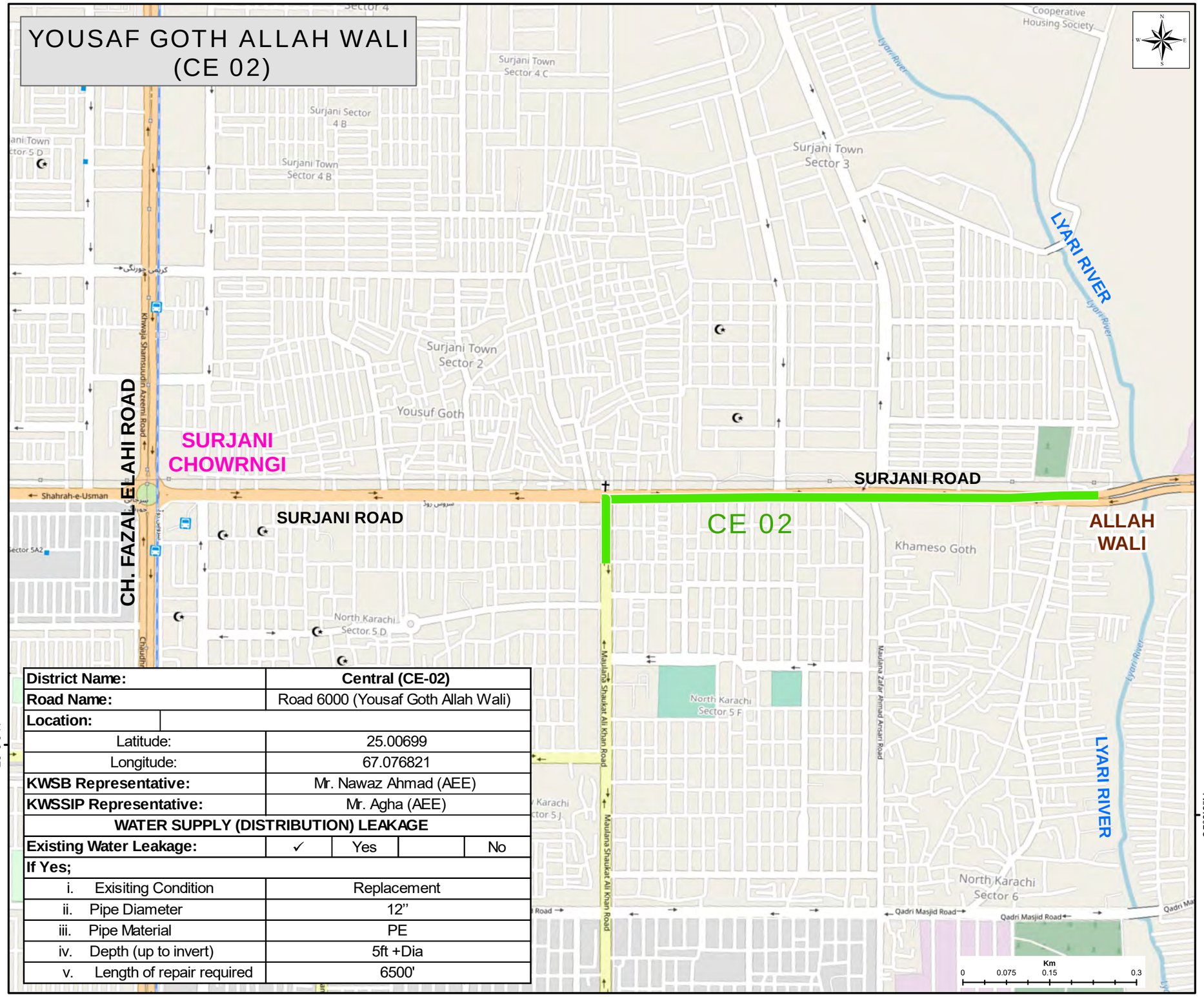
SCALE 1:12,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

YOUSAF GOTH ALLAH WALI (CE 02)



District Name:	**Central (CE-02)**			
Road Name:	Road 6000 (Yousaf Goth Allah Wali)			
Location:				
Latitude:	25.00699			
Longitude:	67.076821			
KWSB Representative:	Mr. Nawaz Ahmad (AEE)			
KWSSIP Representative:	Mr. Agha (AEE)			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition	Replacement			
ii. Pipe Diameter	12"			
iii. Pipe Material	PE			
iv. Depth (up to invert)	5ft +Dia			
v. Length of repair required	6500'			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 17 OF 22

SCALE 1:11,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

Mukka Chowk Comprehensive School (CE 03)

District Name:	**Central (CE-03)**			
Road Name:	Mukka Chowk Comprehensive School			
Location:				
Latitude:	24.921364			
Longitude:	67.070125			
KWSB Representative:	Mr. Asim Sb (AEE)			
KWSSIP Representative:	Mr. Agha Sb (AEE)			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	18", 6"			
iii. Pipe Material	A.C Pipe			
iv. Depth (up to invert)	6' + Dia			
v. Length of repair required	25' (18")/250' (6")			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200 300

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 18 OF 22

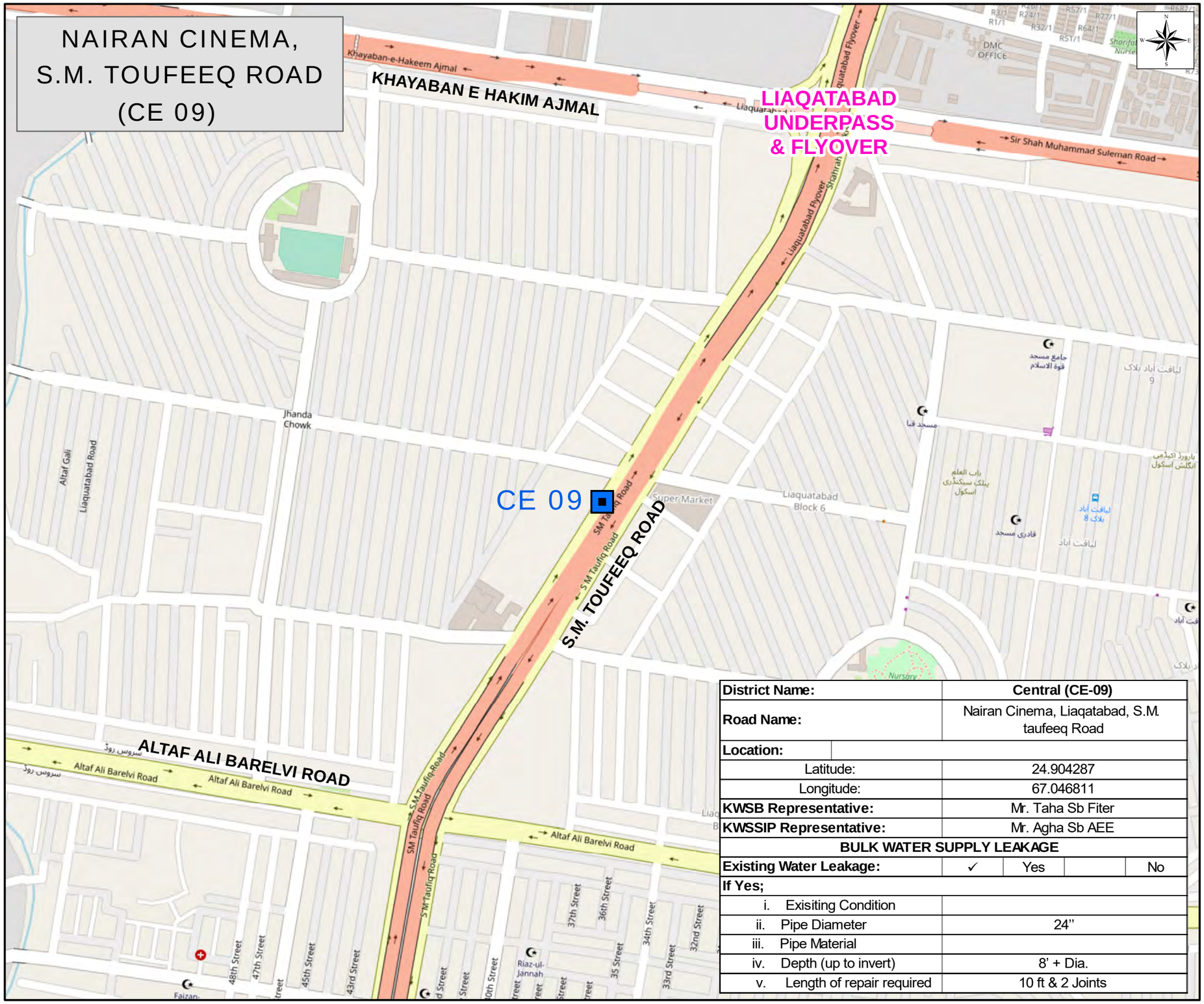
SCALE: 1:5,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

NAIRAN CINEMA, S.M. TOUFEEQ ROAD (CE 09)



District Name:	**Central (CE-09)**			
Road Name:	Nairan Cinema, Liaqatabad, S.M. taufeeq Road			
Location:				
Latitude:	24.904287			
Longitude:	67.046811			
KWSB Representative:	Mr. Taha Sb Fiter			
KWSSIP Representative:	Mr. Agha Sb AEE			
BULK WATER SUPPLY LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	24"			
iii. Pipe Material				
iv. Depth (up to invert)	8' + Dia.			
v. Length of repair required	10 ft & 2 Joints			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Km: 0 0.045 0.09 0.18

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 19 OF 22

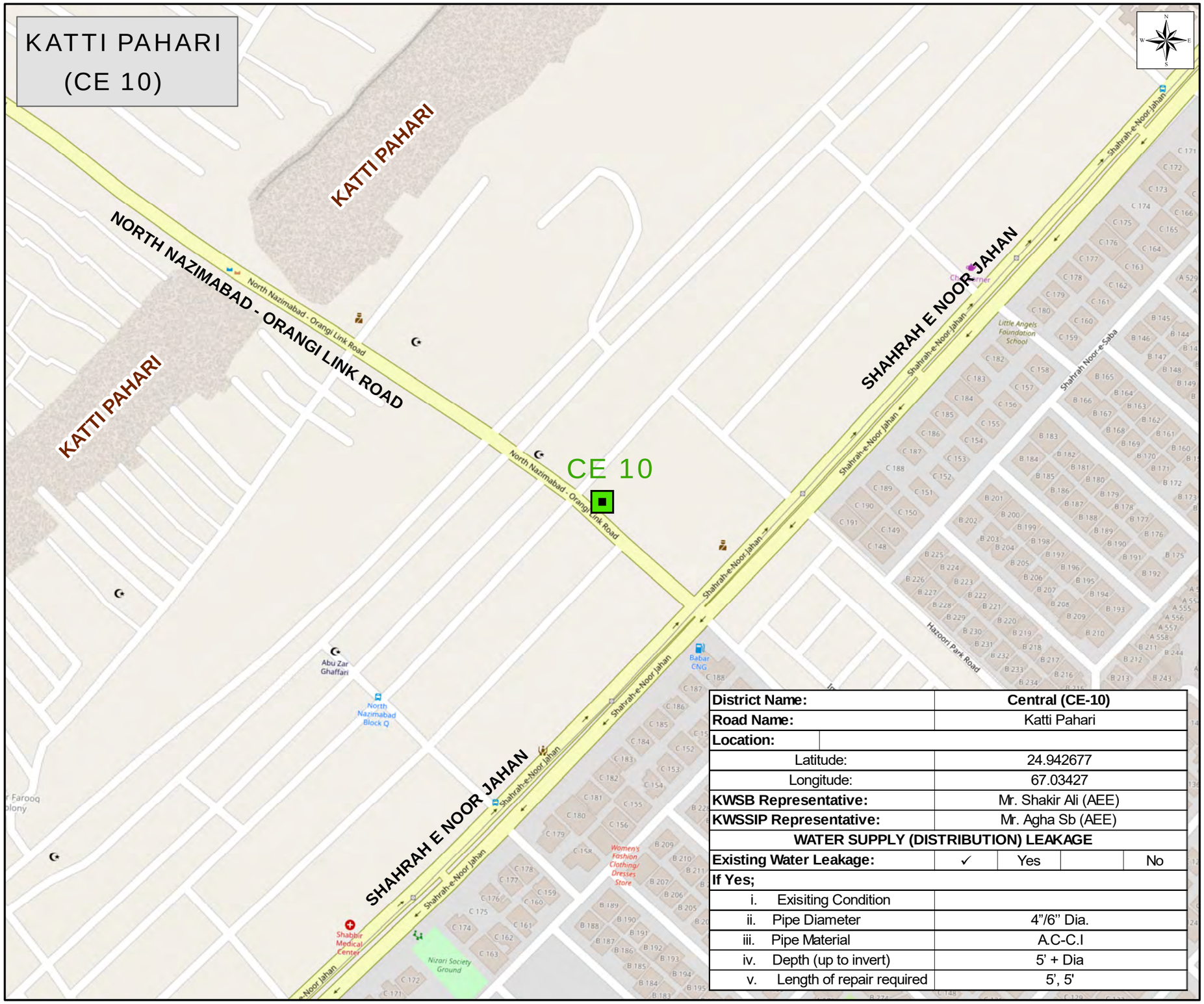
SCALE: 1:5,500

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

KATTI PAHARI (CE 10)



District Name:	**Central (CE-10)**			
Road Name:	Katti Pahari			
Location:				
Latitude:	24.942677			
Longitude:	67.03427			
KWSB Representative:	Mr. Shakir Ali (AEE)			
KWSSIP Representative:	Mr. Agha Sb (AEE)			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	4”/6” Dia.			
iii. Pipe Material	A.C-C.I			
iv. Depth (up to invert)	5’ + Dia			
v. Length of repair required	5’, 5'			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 20 OF 22

SCALE: 1:3,000

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

SHERSHAH ROUNDABOUT
(KE 01)

District Name:	**Keemari (KE-01)**			
Road Name:	Shershah Roundabout			
Location:				
Latitude:	24.890541			
Longitude:	66.985176			
KWSB Representative:				
KWSSIP Representative:	Mr.Ajaz (XEN)			
BULK WATER SUPPLY LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition				
ii. Pipe Diameter	24”			
iii. Pipe Material				
iv. Depth (up to invert)	10ft+dia			
v. Length of repair	10ft to 15ft			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 21 OF 22

SCALE: 1:3,300

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

NOURUS CHOWRANGI
(KE 02)

District Name:	**Keemari (KE-02)**			
Road Name:	Nourus Chowrangi			
Location:				
Latitude:	24.905214			
Longitude:	67.016777			
KWSB Representative:				
KWSSIP Representative:	Mr.Ajaz (XEN)			
WATER SUPPLY (DISTRIBUTION) LEAKAGE				
Existing Water Leakage:	✓	Yes		No
If Yes;				
i. Exisiting Condition	Running			
ii. Pipe Diameter	12", 18"			
iii. Pipe Material	PE			
iv. Depth (up to invert)	7ft to 8ft (Invert)			
v. Length of repair	150ft to 200ft			

Legend

Joint / Valve Repair Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

Line Repair Locations

- Sewer Repair
- Water Supply Bulk Repair
- Water Supply Distribution Repair

Meters: 0 50 100 200

CLIENT: PIU-KWSSIP, KW&SB

CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED

DRWAN	ATHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-1)

LOCATION / LAYOUT OF REPAIR WORKS

SHEET 22 OF 22

SCALE: 1:3,500

DATE: OCTOBER, 2022

DRAWING NO: 4321/11/TD/LM02

REV.

Annex – XI

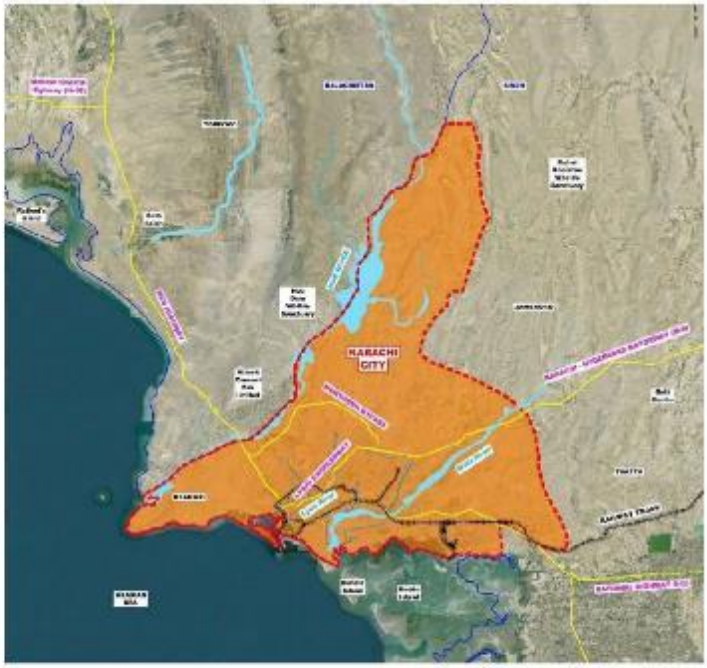
Anti-Encroachment Drive (AED)

Screening Report

PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP
KARACHI WATER & SEWERAGE BOARD (KWSB)

KWSSIP | Karachi Water and Sewerage Services Improvement Project

ANTI-ENCROACHMENT DRIVE (AED) SCREENING



REPORT

Repair and Replacement of Damaged Sections of Water Lines and Sewers in Different Parts of Karachi First Karachi Water and Sewerage Services Improvement Project (KWSSIP-1)

October, 2022

National Engineering Services Pakistan (Pvt) Limited
1-C, Block N, Model Town Ext, Lahore 54700, Pakistan
Phone: +92-42-99090000 Ext 458 Fax: +92-42-99231950
Email: info@nespak.com.pk, ephe@nespak.com.pk
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Clearance Code		Doc No.		Rev No.	00

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LIST OF ABBREVIATIONS / ACRONYMS

AED	Anti-encroachment drive
AIIB	Asian Infrastructure and Investment Bank
CLICK	Competitive and Livable City of Karachi
ESS	Environmental and social sustainability
GIS	Geographic information system
GoS	Government of Sindh
KMC	Karachi Metropolitan Corporation
KW&SB	Karachi Water and Sewerage Board
KWSSIP	Karachi Water and Sewerage Services Improvement Project
NESPAK	National Engineering Services Pakistan
OP	Operational policy
PAD	Project Appraisal Document
PIU	Project Implementation Unit
PRRP	Project Risk Reduction Procedure
RPF	Resettlement Policy Framework
SMF	Social Management Framework
WB	World Bank

FIRST KARACHI WATER AND SEWERAGE SERVICES IMPROVEMENT PROJECT (KWSSIP-1)

ANTI-ENCROACHMENT DRIVE (AED) RELATED SCREENING REPORT

Repair and Replacement of Damaged Sections of Water Lines and Sewers in Different Parts of Karachi

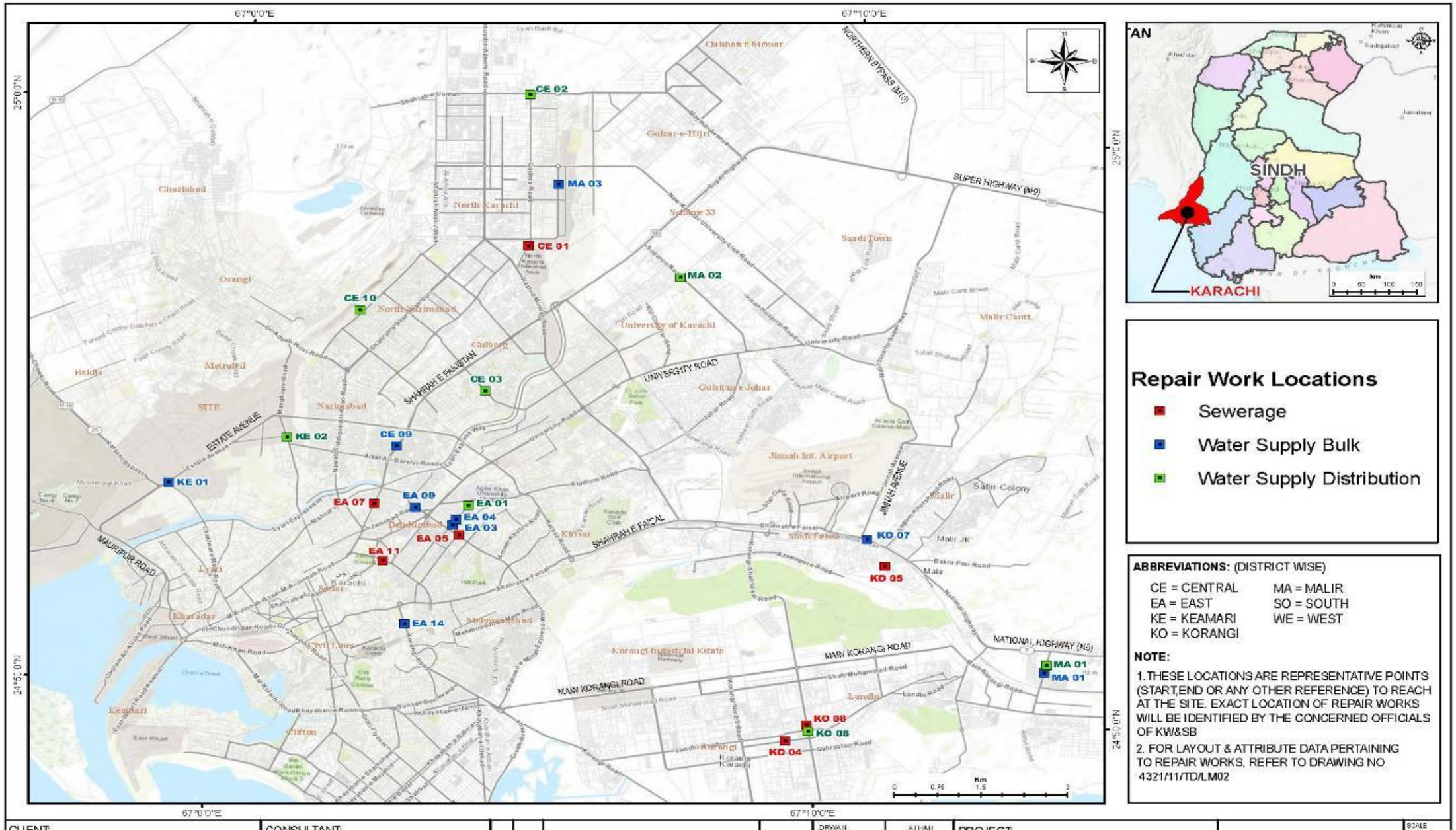
1. Introduction

The First Karachi Water and Sewerage Services Improvement Project (KWSSIP-1), funded by World Bank (WB) and Asian Infrastructure Investment Bank (AIIB), is an initiative of the Government of Sindh (GoS) through Karachi Water and Sewerage Board (KWSB) to improve water and sewerage services in Karachi.

In compliance with the local regulations and WB safeguard policies, this Screening Report has been prepared to assess potential adverse environmental and social impacts of a subproject under KWSSIP comprising repair/replacement of damaged sections of water lines and sewers in different districts of Karachi.

Karachi with an estimated population of 20 million, is Pakistan's largest city, economic-financial hub, and main seaport. Recent rain events have severely damaged the water and sewerage infrastructure of the city. It has been assessed that the present water supply network including both water trunk mains and the distribution mains have developed leakages while the sewerage system has also developed crown failure of its joints in the sewerage pipes at different locations in almost all districts of Karachi. In the meantime, Project Implementation Unit (PIU)-KWSSIP, KWSB has been entrusted with the task to identify and carry out the repair of water supply and/or sewerage lines under the damaged sections of water and sewerage system in Karachi after conducting a comprehensive survey to identify the locations of the damaged sections and the extent of the damages to carry out their repairs/replacement. After conducting the repair /replacement of the water and sewerage network under KWSSIP-1, repair and rehabilitation of roads will be carried out on the damaged road sections will be carried out under the project "Competitive and Livable City of Karachi (CLICK).

Currently, 22 locations have been finalized for repair/replacement works of water and sewerage network. The location map of the finalized sites is shown in **Figure 1**.



Repair Work Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

ABBREVIATIONS: (DISTRICT WISE)

CE = CENTRAL	MA = MALIR
EA = EAST	SO = SOUTH
KE = KEAMARI	WE = WEST
KO = KORANGI	

NOTE:

1. THESE LOCATIONS ARE REPRESENTATIVE POINTS (START,END OR ANY OTHER REFERENCE) TO REACH AT THE SITE. EXACT LOCATION OF REPAIR WORKS WILL BE IDENTIFIED BY THE CONCERNED OFFICIALS OF KW&SB
2. FOR LAYOUT & ATTRIBUTE DATA PERTAINING TO REPAIR WORKS, REFER TO DRAWING NO 4321/11/TD/LM02

CLIENT: KWSSIP — PIU-KWSSIP, KW&SB	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE: NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	REV.	DATE	DESCRIPTION	APPROVED	DRAWN	ATHAR	PROJECT: REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (PACKAGE-I)	TENTATIVE LOCATION PLAN OF REPAIR WORKS	SCALE 1:100,000
						SUBMITTED			DATE OCT., 2022	DRAWING NO 4321/01/TD/LM01	REV
						RECOMMENDED					
						CHECKED					
						APPROVED					

Figure 1: Location Map

2. Anti-Encroachment Drive (AED)

Informal settlements and squatters are widespread in Karachi, including residential and commercial encroachers on vacant lands, sidewalks, public spaces etc. A major Anti-Encroachment Drive (AED) was initiated in Karachi in October 2018 on the order of the Supreme Court of Pakistan. The Court ordered to vacate public spaces (parks, footpaths, amenity plots, etc.) across the city from unauthorized uses and occupations. The order is currently under implementation by various civic and local agencies, including Karachi Municipal Corporation (KMC), who are required to report periodically to the Court on progress. The focus of the AED is on commercial activities encroaching public spaces. Thousands of businesses, street vendors and hawkers have been affected, primarily in the most commercial districts. Acknowledging the adverse impacts of AED on the poor and vulnerable groups, the Government of Sindh (GoS) and local agencies like KMC are making efforts to relocate some affected businesses.

2.1 Types of Structures and/or Non-structures affected by AED Activities

Types of structures removed or affected by AED activities are listed below:

- Illegal shops/cabins
- Sunshades
- Illegal walls and wall fixtures
- Extended portions (of shops, hotels, cabins, marriage halls)
- Marriage halls/fitness centers/buildings/illegal construction on green
- Belts and plots
- Chabootras (paved terrace, raised platform) and foot steps
- Thailay (pushcarts)/ patharay (selling on rug, or table counter)/counters, misc.

2.2 Zone of impact:

In general, for sewer and water network refurbishment and rehabilitation, the zone of impact is defined as the trench for the placement of the sewer or water supply pipe in the street and any additional area required for construction-related activities (construction camp, parking of machinery, stocking of materials, debris, backfill, area used by construction labor, or any other temporary use etc.); and, any areas impacted temporarily by the construction (e.g., due to reduced access). The World Bank policies (particularly Operational Policy 4.12 - OP 4.12) and the screening mechanism apply to the project zone of impact.

2.3 Project's Policy on AED

The KWSSIP policy on AED states that *potential subproject sites (including proposed construction sites and associated zones of impact) located within areas already impacted by the AED on or after October 27, 2018 will not be eligible for financing under the project.*

2.4 Project's Planning in view of AED

In accordance with this policy, the schemes under KWSSIP where AED activities have been carried out in recent times shall be removed from the project scope.

3. KWSSIP's Project Risk Reduction Procedure (PRRP)

Each subproject under KWSSIP was first assessed to determine if it is located in an area affected by AED. The assessment also determined the extent to which surrounding areas of the proposed subproject were also affected by AED. Only subprojects whose construction sites plus associated zones of impact are located in areas that have not been impacted by the AED are eligible for financing. Zones of impact for different typologies of subprojects were determined, on a case-by-case basis, following procedures outlined in the project's Social Management Framework (SMF)/ Resettlement Policy Framework (RPF). These screening criteria are summarized below as a step-wise process and are described in detail in the project's SMF and RPF.

Step 1: KWSB prepared a list of subprojects for renewal, rehabilitation, and replacement of the sewerage and water supply networks rehabilitation during early KWSSIP implementation. These lists of subprojects were matched with the lists of areas where the AED activities have taken place in Karachi – available with the Commissioner Karachi Division - to identify if any of the subprojects lie in any of these areas. This 'matching' enables the current AED status of each subproject to be identified. Only subprojects with no AED are eligible for the WB financing and their preparation will continue in accordance with safeguards frameworks and other WB policies.

Step 2: While KWSSIP ensures exclusion of areas where AED has already happened in the past (under Step 1), there may be unforeseen cases in which government agencies need to carry out AED activities, under Supreme Court orders, in KWSSIP subproject areas while construction is underway. In order to address such unforeseen cases, KWSB will develop a working arrangement with the Commissioner Karachi Division (the office tasked by the GoS to co-ordinate AED activities in Karachi) to ensure compliance with the KWSSIP RPF during subproject construction.

Step 3: KWSB prepares a screening report for each subproject- including evidence of no AED in the subproject area; photographic record and baseline information documentation for each subproject; letter of agreement with the Commissioner Karachi Division – and share it with the third-party monitor for verification. The verified report is submitted to the WB for clearance and no objection.

4. Screening of AED Affected Areas

Currently, no data is available with the concerned departments regarding AED. However, to address this issue, an AED Cell is established at Commissioner's office which is updating data of ongoing AED activities happening in Karachi, The focal persons of respective departments who are responsible for conducting AED have been trained and equipped with a data collection application, KOBOTOOLBOX through which they collect data of AED, which is uploaded on the GIS platform of AED cell.

A through screening process was conducted to acquire the desired information regarding AED. Commissioner's office was taken on board and a meeting was held with Additional Commissioner – II and Assistant Commissioner. The summary of meeting is given in **Table 1** below:

Table 1: Summary of Meetings

Sr. No.	Venue	Date	Time	Participants			Points Discussed
				Name	Department	Designation	
01.	**Commissioner's Office**	15-10-22	12:00 pm	Mr. Jawad Muzaffar	Commissioner's Office	Additional Commissioner - II	• Discussion on previous practice for AED screening • Description of current subprojects/ activities to be undertaken by PIU-KWSSIP • Discussion on the quickest possible methods for AED verification • PIU explained the objectives of the current assignment and shared the list of project sites and timelines of the project.
				Miss Sara	Commissioner's Office	Assistant Commissioner	
				Miss Kiran Bano	KWSSIP	Environmental Expert	
				Mr. Ali Hamid	NESPAK	Team Leader/ E&SS	
				Mr. Syed Zeeshan Abbas	NESPAK	Environmental Engineer	

Meeting with Additional Commissioner – II

4.1 Proposed Subproject

The severe monsoon rains in different parts of Karachi city caused extensive devastation to the city's infrastructure especially to its water supply and sewerage system. The emergency works to address these issues comprise of protection and replacement works of bulk water supply lines and repair/ replacement of water and sewerage lines. These works will be carried out under KWSSIP 1.

The proposed emergency works comprise of repair/ rehabilitation of the following components:

The sub project "Repair/Replacement of Damaged Sections of Water Lines and Sewers in Different Parts of Karachi" is one of the project that will be part of emergency works. A detailed Environment and Social Screening including Anti Encroachment Drive Screening is conducted for this sub project.

Under this subproject, following works shall be executed;

- Repair of joints.
- Repair of sluice valve.
- Repair/replacement of pipes (sewer & water).

The description of activities is given in **Table 2**.

Table 2: Description of Activities

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
District East				
1	Shahzad Khalid Road	Diameter= 24" Material= Pre-Stressed Reinforced Cement Concrete (PRCC) Depth= 7'-0" Repair= 1 Joint to be repaired	Diameter= 6" Sluice Valve Material= Polyethylene (PE) Depth= 5'-6" Repair= Sluice valve needs to be changed	No
2	Jamalluddin Afghani Road	Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 1 joint to be repaired	No	No

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sharfabad Chowrangi at Jamalluddin Afghani Road	Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 2 to 3 joints to be repaired	No	No
4	Shaheed-e-Millat Service Road, Right Side just before Tariq Road	No	No	Diameter= 12" Material= Reinforced Cement Concrete (RCC) Depth= 4' to 6' Repair/Replacement Length = 200'
5	Jahangir Road	No	No	Yes
6	Jail Road in front of Jail Gate	Diameter= 33" Material= PRCC Depth= 8' Repair= 20 joints to be repaired	No	No
7	Shahrah-e-Qaideen Khudadad Colony (Mazar-e-Quaid Underpass)	No	No	Diameter= 24" Material= RCC Type= 7' to 8' Repair/replacement = 300'
8	Near FTC Flyover, Shahrah-e-Faisal	Diameter= 15" Material= Mild Steel (MS) Depth= 9'-6" Repair= 7', 3 joints to be repaired		
District Korangi				
9	11000 Road from 12000 Road to 14000 Road			Diameter= 18 & 24"" Material= RCC Depth= 3' to 5' + Dia Repair= 2000' 18" & 2000' 24"
10	Jamia Millia Road after Malir 15	No	No	Diameter= 36" Type= RCC Depth= 10ft+Dia Repair= 250ft
11	Malir Halt Flyover	Diameter= 33" Material= PRCC Depth=8ft+diameter Repair= 300'	No	Gate Valve Required

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
12	Under Korangi Flyover	No	Diameter= 33" Material= PRCC Depth=9'-6" Repair=10 Joints & 300'	Diameter= 24" Material= RCC Depth= 12' to 14' Repair= 1000'
District Malir				
13	Zafar Town Road between Manzil Pump to Younus Chowrangi	Diameter= 48" Material= PRCC Depth= 10' Repair= 6 joints	Diameter= 4" & 6" Material= PE Depth= 6ft+Diameter Repair= 4" 200' & 6" 200'	No
14	Near Gulshan-e-Kaneez Fatima	No	Diameter= 18" Material= PRCC Depth= 6' Repair= 5500'	No
15	Saba Cinema to Jamali Bridge	Diameter= 54" Material= PRCC Depth= 8'+Diameter Repair= 50ft length	No	No
District Central				
16	Road 7000 (Godra)	No	No	Diameter= 36" Material= RCC Depth= 18' Repair= 8350'
17	Road 6000 (Yousuf Goth Allah Wali)	No	Diameter= 12" Material= PE Depth= 6' Repair= 6,500' length	No
18	Mukka Chowk Comprehensive School	No	Diameter= 18",6" Material= Asbestos Cement Depth= 6ft+Diameter Repair= 25' length of 18" Diameter line 250' length of 6" diameter line	No
19	Nairan Cinema, Liaqatabad, S.M. Toufeeq Road	Diameter= 24" Material= Not Known Depth= 8'+Diameter Repair= 10 ft & 2 Joints	No	No
20	Katti Pahari	No	Diameter= 4" (AC), 6" (CI) Material= AC (Asbestos cement), CI (Cast Iron) Depth= 5ft+Dia Repair= 5' length of	No

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
			4” diameter line, 5’ length of 6” diameter line,	
District Keamari				
21	Shershah Roundabout	Diameter= 24'' Material= Not Known Depth= 12’ Repair= 10’ – 15’ length of Pipeline	No	No
22	Nourus Chowrangi	No	Diameter= 12'', 18'' Material= PE Depth= 7’-8’ Repair= 150’ to 200’ length of Pipeline	No

4.2 Team Composition

The AED-related screening was carried out by the following team:

Sr. No.	Name	Designation	Department
1	Ms. Hameeda Kaleem	Gender/Social Expert	KWSSIP
2	Ms. Kiran Bano	Environmental Expert	KWSSIP
3	Mr. Ali Hamid	Group Leader-E&SS	NESPAK
4	Mr. Syed Zeeshan Abbas	Senior Engineer	NESPAK
5	Mr. Abdul Manan	Senior Engineer	NESPAK
6	Mr. M. Anns	Junior Engineer	NESPAK

4.3 Date of AED-Related Screening

AED-related screening activities were conducted between 05.10.2022 to 15.10.2022.

4.4 Methodology Adopted for AED-Related Screening

The following methodology was adopted for AED-related screening:

The environmental and social experts of PIU-KWSSIP along with their consultants conducted field visits (05.10.2022 – 15-10.2022) to collect evidence of AED from visual observations and through

public consultations. The data was collected through a mobile application 'KOBOTOOLBOX' and was updated in the GIS database of the Commissioner's office dealing with AED. Then the same team convened a meeting with Additional Commissioner – II and requested for issuance of no objection certificates after due verification of collected data from relevant District Municipal Corporations (DMCs) and/or Deputy Commissioners. DMCs verified the data and have issued no objection certificates attached as **Annex – I**.

4.5 Public Consultations

Informal public consultations were held at the subproject sites to ascertain the views and information from the locals including residents and business operators regarding AED-related activities in the project area. People were gathered during consultations and the following points were discussed:

- People were given a brief introduction to the proposed project activities;
- People were enquired about AED activities in their area after October 2018.
- It was briefed that the project has been designed by keeping in view minimum loss of business, hindrance in excess to business premises, and disturbance to local residents by adopting best planning and engineering practices
- Efficient construction management will be ensured throughout the project in order to minimize disturbance during construction.

The schedule of consultations is presented in Table 3

Table 3: Schedules of Consultation Meetings

Sr. No.	Location	Date / Time	Venue	No of Participants
1	Katti Pahari	13-10-2022 04:00 pm	New Quetta Malang Jaan Restaurant	14 Persons
2	Korangi Flyover	14-10-2022 11:00 am	Under Korangi Flyover	18 Persons
3	Korangi Flyover	14-10-2022 12:00 pm	I. Area Korangi 5 No. (Muuna Bhai General Store)	15 Persons
4	Mehran Depot Morr	14-10-2022 03:00 pm	Haji Rahim Khan Village	28 Persons
5	Shershah Chorangi	15-10-2022 10:00 am	Shershah Chorangi	20 Persons
6	Nourus Chorangi	15-10-2022 12:00 pm	Quetta Hotel	14 Persons
7	Shahrah e Qaideen	15-10-2022 02:00 pm	Mujahid Aluminium	15 Persons
8	Shahrah e Qaideen	12:00 pm 03:00 pm	Qadri Hotel	09 Persons

Sr. No.	Location	Date / Time	Venue	No of Participants
9	Malir Halt	06-10-200 05:00 pm	Under Flyover	07 persons
10	Jail Road	06-10-2022 09:30 pm	Jail Road	04 persons
11	Nairan Cinema	06-10-2022 10:30 pm	Nairan Cinema	04 persons
12	4000 Road Korangi	07-10-2022 02:00 pm	Korangi	07 persons

Mostly, the people were in favor of the project. The findings regarding AED are given in **Table 4**.

4.6 Findings

Based on the information acquired through visual observations and public consultations, it is derived that no AED has been conducted in project sites since October 2018. The site photographs along with the subproject locations are attached as **Annex – II**.

Table 4: Findings on AED

Sr. No.	Representative	Observations	Concerns/ Apprehensions	Responses
1	Concerned Departments	No AED	--	--
2	KWSSIP	No AED	--	--
3	NESPAK	No AED	--	--
4	Community	No AED	• The roads are unpaved. • Mixing of sewage and potable water in lines. • Few sewer lines are old and punctured. • There are traffic issues due to stagnant water and damaged roads.	• All the said issues shall be resolved after the execution of the current project. The road patchwork shall be done after the improvement of underground water supply and sewerage issues.

4.7 Conclusions

The following are the conclusions of AED-related screening:

- No AED has been done in the selected project sites;
- No Objection Certificates (NOCs) have been issued by the Commissioner's office in this regard.

4.8 Photolog


Consultation Meeting with Rickshaw Drivers under Korangi Flyover, District Korangi


Consultation Meeting at I-Area, District Korangi


Consultation Meeting at Katti Pahari, District Central


Consultation Meeting at Naurus Chorangi, District Keamari


Consultation Meeting at Shershah Chorangi, District Keamari


Consultation Meeting at Shahrah e Quaideen


Consultation Meeting at Shahrah e Quaideen


Consultation Meeting at Industrial Area, District Korangi


Consultation Meeting at Malir Halt

Consultation Meeting at Haji Rahim Khan Village


Individual Consultation Meetings in District Central


Individual Consultation Meetings in District Central



Individual Consultation Meetings in District Malir


Individual Consultation Meetings in District Korangi

Tel:99204734
4th Club Road,
Opposite Karachi
Gymkhana, Karachi-75530.

No. CK/AC(HQ)/ 797 /2022.

OFFICE OF THE
COMMISSIONER
KARACHI DIVISION

Dated: 21 - 10 -2022.

To,

The Project Director,
Karachi Water & Sewerage Services Improvement Project (PIU),
KW&SB, Karachi.

Subject: **ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR / REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS).**

I am directed to refer to your office letter No. PD(KWSSIP)/KW&SB/2022/708, dated 14th October, 2022, on the subject noted above and to enclose herewith the copies of following reports / no AED Verification Certificates as required for information and necessary action:

Sr. No.	REPORT / CERTIFICATE FURNISHED BY	LETTER NO. & DATE
01.	Office of the Deputy Commissioner, District Keamari	Letter No. DC(Keamari)/K/ADC-I/2309/2022, dated 18-10-2022.
02.	Office of the Deputy Commissioner, District East	Letter No. DC/K/E/Rev. Br./2408/2022, dated 20-10-2022.
03.	Office of the Deputy Commissioner, District Central	Letter No. DC(C)/ADC-II/P.A/886/2022, dated 18-10-2022.
04.	Office of the Deputy Commissioner, District Korangi	Letter No. ADC-II/D.K/743/2022, dated 20-10-2022.
05.	Office of the Deputy Commissioner, District Malir	Letter No. DC/Malir/K/Rev.Br/749/2022, dated 19-10-2022.

21.10.2022

Assistant Commissioner (Headquarters)
for Commissioner Karachi Division

Copy to:-

1. The Project Director, Karachi Water & Sewerage Services Improvement Project (Project Implementation Unit), KW&SB.
2. The Deputy Commissioner, District Keamari, East, Central, Korangi & Malir, Karachi.
3. PS to Commissioner Karachi Division.
4. Incharge R&I branch of this office for distribution.

OFFICE OF THE DEPUTY COMMISSIONER
DISTRICT KEAMARI-KARACHI

No. DC(Keamari)/K/ADC-I/2379/2022
Karachi. Dated: 18/10/2022

To,

The Assistant Commissioner (H.Q),
For Commissioner, Karachi Division,
Karachi.

SUBJECT: ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR /REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-I)

With reference to your office letter No. CK/AC(HQ)778/2022, Dated: 14-10-2022, on the subject cited above.

It is, inform you that since 27-Oct-2018, No Anti-Encroachment Drive (AED) was conducted wherein hard encroachments were removed from the sites of District Keamari, mentioned in the enclosure of the letter.

Therefore, the report in the matter may kindly be treated as Nil.

ADDITIONAL DEPUTY COMMISSIONER-I
FOR DEPUTY COMMISSIONER
KEAMARI-KARACHI

Copy to:-
1. P.S to Deputy Commissioner, District Keamari Karachi.

Address: Estate Avenue Road, Opposite Habib Bank S.I.T.E, Karachi. Telephone No. 021-99334016-7, Fax: 021-32555615. Email Deputycommissionerkeamarikarachi@gmail.com.

Scanned with CamScanner

OFFICE OF THE
DEPUTY COMMISSIONER
KARACHI EAST
District Council Building Near Civil Courts Karachi
Tel# 021 99231211 Fax# 99210094
NO. DC/K/E/Rev.Br/2408 /2022.
Dated: 20 / 10 /2022.

To,

The Assistant Commissioner (Headquarter)
Commissioner Karachi Division,
Karachi.

SUBJECT: **ANTI ENCROACHMENT VERIFICATION & CERTIFICATE OF REPAIR / REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-I)**

This has reference to your office letter No. CK/AC(HQ)/778/2022 dated 14.10.2022, on the subject noted above.

It is stated that there is no Anti-Encroachment Drive (AED) in this District, hence the report called for may please be treated as blank / Nil

Additional Deputy Commissioner-I,
District East, Karachi.

Copy to:-

The P.A to Deputy Commissioner District East Karachi

OFFICE OF THE
DEPUTY COMMISSIONER
DISTRICT KARACHI CENTRAL

No. DC(C)/ADC-II/P.A/886/2022 Karachi dated 18/10/2022

Near Sakhi Hassan, North Nazimabad Karachi, Ph: 021-99260042 FAX 021-99260036, E-Mail, dccentralkarachi@gmail.com

To,

The Assistant Commissioner (HQ),
For Commissioner Karachi Division,
Karachi.

SUBJECT: ANTI ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR/ REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-1)

Kindly refer to your letter No. CK/AC(HQ)/778/2022, dated 14.10.2022, regarding the subject noted above.

It is submitted that since 27th October 2018, No Anti Encroachment Drive (AED) was conducted wherein hard encroachments were removed from the sites of District Central, mentioned in the enclosure of the letter.

Therefore, the report in the matter may kindly be treated as NIL.

18-10-2022

ADDITIONAL DEPUTY COMMISSIONER-II
DISTRICT CENTRAL KARACHI

OFFICE OF THE
DEPUTY COMMISSIONER
DISTRICT KORANGI KARACHI

No.A.D.C.II/D.K/ 2713 /2022
Dated 30 / 10 /2022

The Assistant Commissioner (Headquarter),
For Commissioner Karachi Division
Karachi.

Subject: **ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR / REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-I)**

Please refer to your office letter vide No. CK/AC(HQ)/778/2022 dated 14.10.2022 on subject noted above. The requisite information called from the Assistant Commissioners of District Korangi, Karachi (copies enclosed) and they certified that there is no anti-encroachment drive has taken place since 27th October, 2018 to 17th October, 2022, in the following mentioned below places:

Sr #	Sector	Location	Latitude	Longitude	District
1	Sewerage	11000 Road from 12000 Road to 11000 Road	2449.545	06709197*	Korangi
2	Water	Under Korangi Flyover	2449.788	06709836*	Korangi
3	Water	Malir Halt Flyover	2453.085	06710591*	Korangi
4	Sewerage	Jamia Milia Road after Malir 15	2452617	06711033*	Korangi

This is for information and necessary action.

(MUHAMMAD NAWAZ KALWAR)
ADDITIONAL DEPUTY COMMISSIONER-II
FOR DEPUTY COMMISSIONER
DISTRICT KORANGI KARACHI

Copy to:

1. The Project Director KWSSIP, Karachi.
2. P.A to Deputy Commissioner District Korangi, Karachi.

OFFICE OF THE DEPUTY COMMISSIONER
DISTRICT MALIR KARACHI

No:DC/Malir/K/Rev.Br/ -1419 /2022 Karachi, Dated: 19/10/2022

Ph: 02199248911

To,

The Assistant Commissioner (H.Q),
For Commissioner Karachi Division,
KARACHI.

Subject: **ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR / REPLACEMENT OF DEMAGED SECTIONS OF WATER LINES AND SERVICES IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-I).**

With reference to your office letter No. CK/AC/(HQ)/778/2022 dated 18.10.2022 on the subject cited above.

It is to inform your that report was obtained through verbal communication from the Assistant Commissioner Sub-Division Ibrahim Hyderi who has reported that since 27-Oct-2017, no Anti-Encroachment Drive (AED) was conducted.

However, area mentioned at serial No. 14 and 15 does not falls within the jurisdiction of District Malir, Karachi, probably pertains to the District East.

ADDL: DEPUTY COMMISSIONER-I
DISTRICT MALIR KARACHI

Copy for information to:-

- The Deputy Commissioner East, Karachi for want of jurisdiction.
- The Assistant Commissioner Sub-Division Ibrahim Hyderi, Malir, Karachi.

Tel:99204378
4th Club Road,
Opposite Karachi
Gymkhana, Karachi-75530.

OFFICE OF THE COMMISSIONER KARACHI DIVISION, KARACHI

Dated: 14 - 10 -2022.

No. CK/AC(HQ)/ 775 /2022

To,

The Deputy Commissioners,
East, Central, Malir, Keamari, & Korangi
Karachi.

Subject: **ANTI ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-1).**

With reference to the subject, the undersigned is to enclose the letter No. PD(KWSSIP)/KW&SB/2022/708 dated 14th October, 2022 received from Project Director, KWSSIP. In the said letter, a list of 22 sites is enclosed for anti-encroachment verification and issuance of No AED Certificate.

You are requested to direct the focal persons to conduct anti-encroachment screening of the listed sites, and provide the requisite certificate by **Monday, 17th October, 2022 positively** directly to the Office of the Project Director, KWSSIP under intimation to this Office.

For any query or support in this regard, Ms. Kiran, Environmental Specialist, PIU, KWSSIP (contact no. 0333-3145667), and the Office of the undersigned may be contacted.

This may please be treated as **most urgent**.

14.10.2022

ASSISTANT COMMISSIONER (HEADQUARTERS)
for COMMISSIONER KARACHI DIVISION

Copy to:
01. The Project Director, KWSSIP, Karachi.
02. The Additional Commissioner II, Karachi.
03. Ms. Kiran, KWSSIP for necessary coordination with the focal persons.
04. P.S. to the Commissioner, Karachi.

Karachi Water & Sewerage Services Improvement Project
(Project Implementation Unit)
Karachi Water & Sewerage Board
G-40/1, Street # 40, Block 6, P.E.C.H.S., Karachi
Phone: 021-34374031-4 Web: www.kwssip.gos.pk Email: info@kwssip.gos.pk

No. PD(KWSSIP)/KW&SB/2022/ 705 Dated: 14th October, 2022

The Commissioner,
Karachi Division
Karachi

SUBJECT: ANTI- ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR/ REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISRTICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP 1)

The severe monsoon rains in different parts of Karachi city has caused extensive deterioration to the city's water supply and sewerage system which is now damaged and exposed at different strategic locations putting the water and sewerage services for the city at risk of disruption.

As a response to remedy the current conditions, some funds of SOP 1 KWSSIP have been allocated for emergency works and different repair/ replacement works of damaged sections of water lines and sewers are identified which are in critical condition. As per World Bank's Environment and Social requirements, each site under the Karachi Water and Sewerage Services Improvement Project (KWSSIP), KW&SB, Local Government Department Government of Sindh, should have no anti-encroachment.

In this regard, the KWSSIP ESS team and the KWSSIP consultant have conducted a detail screening to identify the AED drives in these areas by physical visiting the identified sites, consultation with local people and collected required data for uploading on the GIS platform of AED Cell under Commissioner Office (List of data to be uploaded on GIS Database of AED Cell and Technical details of all the works to be executed on the identified sites is attached)

In the light of the above AED screening exercise and urgency of the assignment, it is requested to issue no AED verification certificate from 27th October, 2018 for KWSSIP proposed works at the earliest positively by 17th October, 2022.

Your kind cooperation and quick response in the matter is highly appreciated.

Syed Salahuddin Ahmed (PAS)
Project Director, KWSSIP
14th Oct, 2022.

Copy to:
1. Secretary Local Government
2. Managing Director/CEO KW&SB
3. Additional Commissioner II

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Repair/ Rehahabilitation of Water Supply and Sewerage System In Different Districts of Karachi

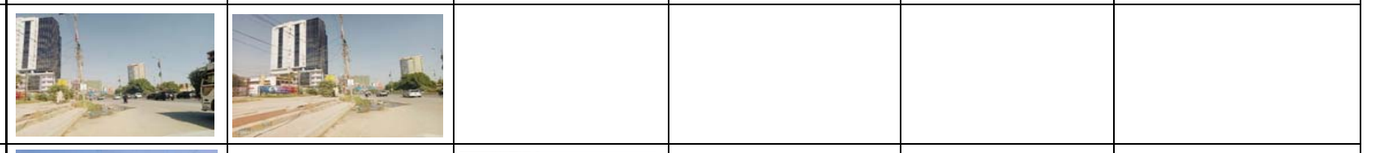
Sr. No.	Sector	Location/Address:	Latitude:	Longitude:	District
1	Sewerage	Shahra e Quaidin (khuda dad Colony)	24'52'273"	067'02' 745"	East
2	Sewerage	Shahzad Khalil Road	24'53 254"	06704 02"	East
3	Water	Sharfabad Jamal ud din Afghani Road	25'53 049"N	06703 878"E	East
4	Water	Jamal ud din Afghani Road	24'52 957"N	06704 807"E	East
5	Sewerage	Shaheed e Millat Service Road before Tariq Road	24'52 786"N	06703 943"E	East
6	Sewerage	Jahangir Road	24'53 254"N	06702 512"E	East
7	Water	Nawan Cinema	24'54 255	06702 812	Central
8	Water	Saba Cinema To Jamali Bridge	24' 59 209"	067' 05 209"	Malir
9	Water	Mukka Chowk	24'55 417"	06704 089"	Central
10	Sewerage	Road 7000 (Godra)	24' 57.821"	0670 4755"	Central
11	Water	6000 Road (Yousaf Goth Allahwali)	25' 00 422"	67' 04 556"	Central
12	Water	Kalti pahlan	24'56 563"	06702 047	Central
13	Sewerage	Shershah Roundabout	24'54 429"	0668 59 099"	Keaman
14	Sewerage	Nouros Chowrangi	24'54 322"	06701 003"	Keaman
15	Sewerage	11000 Road from 12000 Road to 14000 Road	24'49 545"	06709 497"	Korangi
16	Water	Under Korangi Flyover	24'49 788"	06709 836"	Korangi
17	Water	Malir Halt Flyover	24'53 085"	06710 591"	Korangi
18	Sewerage	Jamia Milia Road After Malir 15	24'52 617"	067'11 033"	Korangi
19	Water	Jail Road Infront of Jail Gate	24' 53 100"	067' 03 576"	East
20	Water	Near Gulshan-e-Kaneez Fatima	24' 57 424"	06707 270"	Malir
21	Water	Zafar Town Road between Manzil Pump to Younus Chowrangi	24'51 052"	06713 700"	Malir
22	Water	Near FTC Flyover, Shahrah-e-Faisal	24'51 561"	06703 102"	East

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
		District East		
1	Shahzad Khalid Road	Diameter= 24" Material= Pre-stressed Reinforced Cement Concrete (PRCC) Depth= 7'-0" Repair= 1 Joint to be repaired	Diameter= 6" Sluice Valve Material= Polyethylene (PE) Depth= 5'-6" Repair= Sluice valve needs to be changed	No
2	Jamaluddin Afghani Road	Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 1 joint to be repaired	No	No
3	Sharfabad Chowrangi at Jamaluddin Afghani Road	Diameter= 18" Material= PRCC Depth= 6'-6" Repair= 2 to 3 joints to be repair	No	No
4	Shaheed-e-Millat Service Road, Right Side just before Tanq Road	No	No	Diameter= 12" Material= Reinforced Cement Concrete (RCC) Depth= 4' to 6' Repair/Replacement Length = 200'
5	Jahangir Road	No	No	Yes
6	Jail Road in front of Jail Gate	Diameter= 33" Material= PRCC Depth= 8' Repair= 5 joints to be repair	No	No
7	Shahrah-e-Qaideen Khudadad Colony (Mazar-e-Quaid Underpass)	No	No	Diameter= 24" Material= RCC Type= 7' to 8' Repair/replacement = 300'
8	Near FTC Flyover, Shahrah-e-Faisal	Diameter= 15" Material= MS Depth= 9'-6" Repair= 3 joints to be repair		
		District Korangi		
9	11000 Road from 12000 Road to 14000 Road			
10	Jamia Millia Road after Malir 15	No	No	Diameter= 36" Type= RCC Depth= 10ft+Dia Repair= 250ft

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
11	Malir Halt Flyover	Diameter= 33" Material= PRCC Depth= 8ft+diameter Repair=	No	No
12	Under Korangi Flyover	No	Diameter= 33" Material= PRCC Depth= 9.6" Repair=	Diameter= 24" Material= RCC Depth= 12 to 14' Repair= 1000
		District Malir		
13	Zafar Town Road between Manzil Pump to Younus Chowrangi	Diameter= 48" Material= PRCC Depth= 10' Repair=	Diameter= not clearly known Material= PE Depth= 6'+Diameter Repair=	No
14	Near Gulshan-e-Kaneez Fatima	No	Diameter= 18" Material= PRCC Depth= 6' Repair=	No
15	Saba Cinema to Jamali Bridge	Diameter= 54" Material= PRCC Depth= 8'+Diameter Repair= 40ft to 50ft length	No	No
		District Central		
16	Road 7000 (Godra)	No	No	Diameter= 36" Material= RCC Depth= 18' Repair=
17	Road 6000 (Yousuf Goth Allah Wali)	No	Diameter= 12" Material= PE Depth= 6' Repair= 6,500' length	No
18	Mukka Chowk Comprehensive School	No	Diameter= 18", 6" Material= AC Depth= 6ft+Diameter Repair= 25' length of 18" Diameter line 250' length of 6" diameter line	No
19	Nairan Cinema, Liaqatabad, S M Toufeeq Road	Diameter= 24" Material= Not Known Depth= 8'+Diameter Repair= 5' length	No	No
20	Katti Pahari	No	Diameter= 4" (AC), 6" (CI) Material= AC (Asbestos cement), CI (Cast Iron) Depth= 5ft+Dia Repair= 5' length of 4" diameter line	No

Sr. No.	Road	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
			5' length of 6" diameter line.	
		District Kemari		
21	Shershah Roundabout	Diameter= 24" Material= Not Known Depth= 12' Repair= 10' – 15' length of Pipeline	No	No
22	Nourus Chowrangi	No	Diameter= 12", 18" Material= PE Depth= 7'-8' Repair= 150' to 200' length of Pipeline	No

Repair/ Rehahabilitation of Water Supply and Sewerage System in Different Districts of Karachi

Sr. No.	Sector	Location/Address:	Latitude:	Longitude:	District	Picture
1	Sewerage	Shahzad Khalil Road	24'53.254"	067'04.02"	East	
2	Water	Jamal ud din Afghani Road	24'52.957"N	067'04.807"E	East	
3	Water	Sharfabad Jamal ud din Afghani Road	25'53.049"N	067'03.878"E	East	
4	Sewerage	Shaheed e Milat Service Road before Tariq Road	24'52.786"N	067'03.943"E	East	
5	Sewerage	Jahangir Road	24'53.254"N	067'02.512"E	East	
6	Water	Jail Road Infront of Jail Gate	24' 53.100"	067' 03.576"	East	
7	Sewerage	Shahra e Quaidin (khuda dad Colony)	24'52.273"	067'02.745"	East	
8	Water	Near FTC Flyover, Shahrah-e-Faisal	24'51.561"	067'03.102"	East	
9	Sewerage	11000 Road from 12000 Road to 14000 Road	24'49.545"	067'09.497"	Korangi	
10	Sewerage	Jamia Millia Road After Malir 15	24'52.617"	067"11.033"	Korangi	
11	Water	Malir Halt Flyover	24'53.085"	067'10.591"	Korangi	

12	Water	Under Korangi Flyover	24'49.788"	067'09.836"	Korangi						
13	Water	Zafar Town Road between Manzil Pump to Younus Chowrangi	24'51.052"	067'13.700"	Malir						
14	Water	Nairan Cinema	24'54.255	067'02.812	Central						
15	Water	Saba Cinema To Jamali Bridge	24' 59.209"	067' 05.209"	Malir						
16	Water	Mukka Chowk	24'55.417"	067'04.089"	Central						
17	Sewerage	Road 7000 (Godra)	24' 57.821"	067'0.4755"	Central						
18	Water	6000 Road (Yousaf Goth Allahwali)	25' 00.422"	67' 04.556"	Central						
19	Water	Katti parhari	24'56.563"	067'02.047	Central						
20	Sewerage	Shershah Roundabout	24'54.429"	066'59.099"	Keamari						
21	Sewerage	Nouros Chowrangi	24'54.322"	067'01.003"	Keamari						
22	Water	Near Gulshan-e-Kaneez Fatima	24' 57.424"	067'07.270"	Malir