Rehabilitation of Damaged Water Supply and Drainage Schemes of District Mirpurkhas, Sindh

ENVIRONMENTAL AND SOCIAL SCREENING REPORT (ESSR)

SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)

PLANNING & DEVELOPMENT DEPARTMENT (P&DD) COMPONENT

GOVERNMENT OF SINDH

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Final Report

October, 2023

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DOCUMENT ISSUE AND REVISION RECORD

This document and its contents have been prepared and intended solely for the information and use of the Government of Sindh, Project Implementation Unit (PIU) concerning the **SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)**

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Note: The template of ESSR & E&S Checklist for one District i.e., Larkana is approved by the World Bank. As per the directions of WB on dated 12th April, 2023, the document is reviewed by the E&S team of PIU and submitted to WB team for record and post review purpose.

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1 PROJECT BACKGROUND

The Federal Government of Pakistan requested the global community and development partners for assistance to respond to the flood disaster following the Flood 2022 emergency. Subsequently, the World Bank (WB) task team visited the province and had a series of meetings with the provincial Govt. During the discussions held with the WB Mission, a two-pronged strategy was agreed i.e.

- Restoration/Rehabilitation of Rural (Farm to Market) Roads in affected districts, talukas and UCs.
- Restoration of water supply, drainage and sanitation schemes in affected districts, Talukas and Union Councils.
- Provision of immediate financial assistance, cash for work is proposed to rehabilitate small community structures like rural roads, watersheds, watercourse (s) to carry irrigation water to Farm(s), Rehabilitation of village streets and restoration of village sanitation work including removal of stagnant water in villages. The exact number to be arrived at after assessment.
- Expansion of the Emergency Rescue Service (Sindh Emergency Rescue Services-1122) to 13 districts i.e., Jamshoro, Dadu, Sajawal, Badin, Qambar Shehdadkot, Shikarpur, Jacobabad, Thatta, Ghotki, Naushehro Feroz/Matiari, Umerkot, Sanghar and Shikarpur. Establishment of Satellite Rescue Station at Motorway and National Highways (N-5 & N-55) The Provincial Government has already launched Sindh Emergency Rescue 1122 in Six Districts HQs – Karachi, Hyderabad, Mirpurkhas, Shaheed Benazirabad, Sukkur, and Larkana.

1.1 Project Components

The proposed Sindh Flood Emergency Rehabilitation Project – SFERP falls into four main components.

- Component--1 Infrastructure Rehabilitation:
- Component--2 Livelihoods Restoration
- Component--3 Institutional Strengthening for Resilience and Technical Assistance
- Component--4 Project Management and Operational Cost

1.2 The Proposed Sub-Project

The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected water supply and drainage schemes to improve health & hygiene of local communities by providing safe drinking water with uninterrupted supply. The location map of subproject is given in **Figure 1** and the details of the subproject sites are given below;

1.1 Sub-Project Description

In District Mirpurkhas, there are a total of 43 schemes, comprising 02 drainage schemes and 41 water supply schemes.

Project description	The sub-component "rehabilitation of water supply and drainage schemes" will rehabilitate the selected and prioritized water supply infrastructure that has been destroyed or damaged by the floods. The primary objective of this project is to evaluate the condition of water supply and drainage schemes, which includes assessing filtration techniques, piping, water quality, efficiency and adequacy of equipment, population coverage, and technology employed. This assessment will encompass a comprehensive

	study of network elements such as pumps, tanks, pipe materials, as well as parameters like diameters, flow rates, and the overall functionality of water supply and drainage systems constructed. The subproject schemes are located in Mirpurkhas District of Sindh, Pakistan. The main aim of the said project is to rehabilitate existing sources of water supply and drainage facilities for the flood effected people in District Mirpurkhas.
Environmental and Social Settings	The subproject land is owned by the Government. The proposed activities are the rehabilitation and restoration of damage water supply schemes and drainage facilities. These schemes are the properties of the Government body. There are no major environmental and social impacts of the project activities to the vicinity of the subproject areas. There are no water bodies within the sub-project sites. The subproject rehabilitation activities will not affect any flora, fauna and natural habitat of the area. There are few trees in the vicinity of the proposed subproject areas which will not be disturbed during the rehabilitation works. The environmental and social impacts will be kept at minimum by ensuring the mitigation measures and continuous monitoring. All measures will be planned, organized and implemented which are vital for health and safety of the workers. Instrumental Environmental Testing will be conducted on key parameters like air quality, water quality and noise level determination. Local flora is important to provide shelters for the birds, offer fruits and/or timber/fire wood, protect soil erosion and overall keep the environment very friendly to human living. As such cutting/chopping of flora will not be anticipated. Plantation has been proposed after the completion of the proposed subproject to enhance the aesthetic beauty of the project vicinity. No sub-projects related socioeconomic issues have been recorded during the baseline surveys of the sub-projects. Community and project beneficiaries are very much enthusiastic about the early rehabilitation and completion of the sub-projects. Settlements, including built-up areas such as homes, shops, mosques, graveyards, healthcare facilities and schools are located around sub-project schemes. Community is settled in villages which are actual project beneficiaries. No natural water spring is found in the proposed sub-project area. The site wise detailed of environmental and social setting of the proposed area are presented in the section 1.1.2.

Project Activities/ Scope of Work	Proposed Rehabilitation of Damaged Infrastructures of Water Supply Schemes (WSS) - Rehabilitation of Tube wells - Rehabilitation of Pumping Machinery i.e., Submersible Pumps, Centrifugal Pumps, - Rehabilitation of Solar System - Rehabilitation of Storage Tanks - Rehabilitation of Low Surface Reservoirs (LSRs) - Rehabilitation of Distribution Network i.e., Pipe network - Rehabilitation of Pumping Stations/Buildings - Rehabilitation and improvement of Electric and mechanical works transmission - provision and installation of disinfection system i.e., hypo-chlorinator equipment Rehabilitation of Damaged Infrastructures of Drainage Schemes - Rehabilitation of Street drains - Rehabilitation of Pumping Machinery i.e., sludge Pumps, Motors - Installation of Solar System for alternative power supply - Rehabilitation of Screening Chambers - Rehabilitation of Collecting Tanks - Rehabilitation of Drainage Pumping Station Building - Rehabilitation and enhancement of existing Electric system with automation Work Rehabilitation of Rising Main network to dispose of the drainage
Proposed Date of Commencement of Work:	The Rehabilitation of water supplies and drainage activities will be started in October, 2023 after completion of pre-requisite requirements.

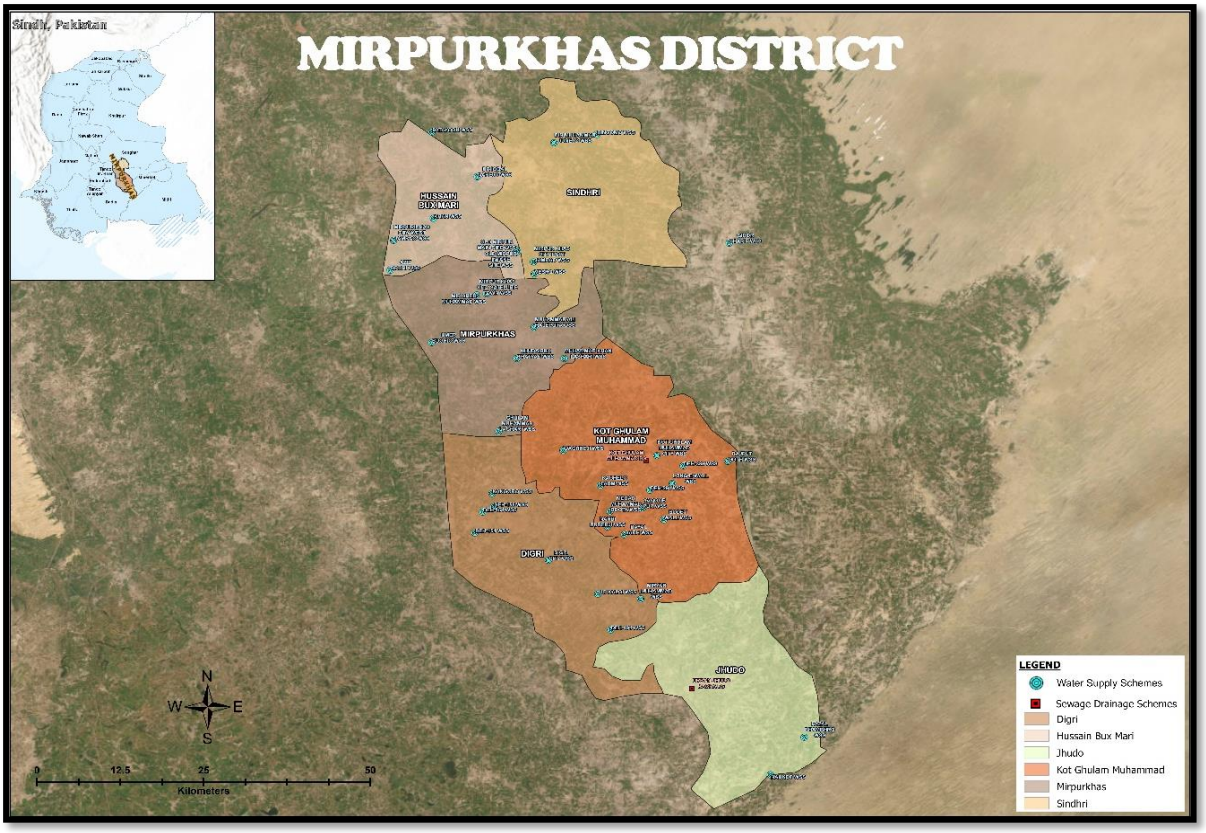


Figure 1: Study Area Map of District Mirpurkhas Water Supply and Drainage Schemes

1.2 Scheme Wise E&S Setting

No.	Schemes	Coordinates	Site Description
A	**Water Supply Schemes Taluka Mirpurkhas**		
1	Mirpur Khas Urban Water Supply Scheme	25°30'39.63"N 69° 0'48.15"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Ring Road when moving towards Mirpurkhas. The number of household and population is 4,653 & 32574 respectively. The area is surrounded by the human settlement with commercial activities. There are some educational and health facilities i.e., New little high school and The Educators School at a distance of 50 m and 131 m in the direction of southeast and west and Govt Girls High School Satellite town at a distance of 190 m on east. A health facility, Dr. Saboor Clinic is adjacent to proposed project site.

No.	Schemes	Coordinates	Site Description
2	Mir Sher Muhammad Water Supply Scheme	25°30'45.28"N 69° 1'34.11"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Umerkot Ring Road when moving towards Mirpurkhas. The number of household and population is 667 & 4668 respectively. The area is surrounded by the human settlement with commercial activities and some agricultural areas. There are some educational facilities i.e., MS School System at a distance of 273 m in the direction of southeast.
3	Mirpurkhas city east jamrao Water Supply Scheme	25°33'24.00"N 69° 5'23.52"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Khipro and Canal Road when moving towards Mirpurkhas. The number of household and population is 429 & 3000 respectively. The area is surrounded by the human settlement and some agricultural areas. There is an educational facility i.e., GBPS Shanghar Mal at a distance of 683 m in the direction of southwest. A canal is flwing at distance of 143 m eastward from proposed project site.
4	Mirpurkhas city west jamrao Water Supply Scheme	25°35'11.06"N 68°54'4.43"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Tando Adam Mirpurkhas Road when moving towards Mirpurkhas. The number of household and population is 214 & 1500 respectively. The area is surrounded by the human settlement and agricultural areas. There are no social sensitive receptors around proposed project site. A canal is flowing on western side at a distance of 157 m from proposed site.
B	**Taluka Shujabad Water Supply Schemes**		
5	Ghulam Muhammad Laghari Water Supply Scheme	25°19'21.83"N 69° 2'34.77"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via

No.	Schemes	Coordinates	Site Description
			Mirpurkhas Digri Road when moving towards Mirpurkhas. The number of household and population is 206 & 1445 respectively. The area is surrounded by the human settlement and agricultural areas. There are no social sensitive receptors around proposed project site.
6	Khuda Bux Khatyan Water Supply Scheme	25°25'23.52"N 69° 4'1.31"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Mirpurkhas Digri Road and further with Juluri road when moving towards Mirpurkhas. The number of household and population is 231 & 1619 respectively. The area is surrounded by the human settlement and agricultural areas. There are no social sensitive receptors around proposed project site except Khatan Masjid which is 146.5 m far.
7	Muhammad Ali Halepota Water Supply Scheme	25°27'59.81"N 69° 5'27.34"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Public School Road when moving towards Mirpurkhas. The number of household and population is 321 & 2250 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and religious facilities around i.e., GBHS Haji Muhammad usman Halepoto at a distance of 147 m and Masjid Haji M. Ali halepoto at a distance of 305 m on southeastern side.
8	Muhammad Khan Lashari Water Supply Scheme	25°25'23.49"N 69° 7'52.12"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Mirpurkhas Digri Road and further with Public School road when moving towards Mirpurkhas. The number of household and population is 200 & 1400 respectively. The area is surrounded by the human settlement and agricultural areas. There are no social sensitive receptors around proposed subproject site. A River Puraan is flowing 1.4 km far from proposed project site in the southern direction.

No.	Schemes	Coordinates	Site Description
9	Umer Bughio Water Supply Scheme	25°26'42.30"N 68°57'8.83"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Mirpurkhas Digri Road and further with Mirwah Gorchan Link road when moving towards Mirpurkhas. The number of household and population is 326 & 2283 respectively. The area is surrounded by the human settlement and agricultural areas. There are educational facilities around proposed subproject site i.e., Govt. Boys Middle and High School Umerabad at a distance of 84 m. A canal is flowing 100 m far from proposed project site in the southern direction.
C	**Taluka Hussain Bux Mari Water Supply Scheme**		
10	Khan Water Supply Scheme	25°37'0.91"N 68°57'18.07"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Mirpurkhas Khan road when moving towards Mirpurkhas. The number of household and population is 671 & 4700 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and health facilities around proposed subproject site i.e., BHU Khan at a distance of 196 m and MS School System Khan at a distance of 371 m. A canal is flowing 911 m far from proposed project site in the eastern direction.
11	Patayoon Water Supply Scheme	25°44'10.87"N 68°57'9.80"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Canal road when moving from Mirpurkhas. The number of household and population is 510 & 3569 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational facilities around proposed subproject site i.e., Govt. High School Ptayon at a distance of 274 m.

No.	Schemes	Coordinates	Site Description
12	Old Mirpur Water Supply Scheme	25°34'25.49"N 69° 3'59.18"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Khipro road when moving from Mirpurkhas. The number of household and population is 1086 & 7605 respectively. The area is surrounded by the human settlement and agricultural areas. There is an educational facility around proposed subproject site i.e., Girls High School at a distance of 231 m.
13	Old Mirpur Intake Water Supply Scheme	25°34'15.44"N 69° 4'4.09"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Khipro road when moving from Mirpurkhas. The number of household and population is 1086 & 7605 respectively. The area is surrounded by the human settlement and agricultural areas. There some educational facilities around proposed subproject site i.e., Girls High School at a distance of 102 m and Govt. Boys High School 96 m away.
14	Vesro Water Supply Scheme	25°32'24.21"N 69° 5'27.13"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Mirpurkhas road when moving from Mirpurkhas. The number of household and population is 389 & 2726 respectively. The area is surrounded by the human settlement and agricultural areas. There is no social sensitive receptor except Masjid Village Vesro at a distance of 145 m.
15	Aziz Brohi Water Supply Scheme	25°32'43.79"N 68°53'48.67"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side when moving towards Mirpurkhas. The number of household and population is 257 & 1800 respectively. The area is surrounded by the human settlement, orchards and agricultural areas. There is no social sensitive receptor except Masjid Jamia ABdullah at a distance of 605 m.

No.	Schemes	Coordinates	Site Description
			A canal is flowing on westward at a distance of 412 m.
16	Dr. Iqbal Narejo Water Supply Scheme	25°40'28.21"N 69° 0'50.33"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side when moving towards Old Mirpurkhas. The number of household and population is 257 & 1800 respectively. The area is surrounded by the human settlement and agricultural areas. There is no social sensitive receptor except GBPS Muhammad Bux Narejo at a distance of 273 m.
D	**Taluka Sindhri Water Supply Scheme**		
17	Hingorno Water Supply Scheme	25°43'58.27"N 69°10'29.89"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Mirpurkhas-Khipro road when moving forward from Mirpurkhas. The number of household and population is 584 & 4085 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational facilities around proposed subproject site like Govt. Girls primary school, Hawks School Hingoro, Govt. Boys Higher Secondary school at a distance of 77 m, 300 m and 532 m respectively.
18	Girhore Shrief Water Supply Scheme	25°34'57.98"N 69°21'11.90"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Mirpurkhas road when moving forward from Mirpurkhas. The number of household and population is 1243 & 8700 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and religious facilities around proposed project area like Govt. Primary School Gumano Menghwar at a distance of 1.3 km and Jamia Masjid Gulshan e Zahra and Masjid Girhor Sharif at a distance of 616 m and 899 m respectively.

No.	Schemes	Coordinates	Site Description
19	Din Muhammad Junejo	25°43'16.89"N 69° 7'2.33"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Sanghar-Mirpurkhas road when moving forward from Sindhri Mirpurkhas. The number of household and population is 486 & 3400 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and health facilities around proposed project area like Govt. Boys High school at a distance of 277 m and hospital khan sahib din muhmmad junejo and MHC Khan Sahab at a distance of 60 m and 360 m respectively.
E	**Taluka Kot Ghulam Muhammad Water Supply Scheme**		
20	Kot Ghulam Muhammad City Water Supply Scheme	25°17'20.90"N 69°15'21.13"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 3851 & 26958 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and health facilities around proposed project area like Govt. Primary School Manzoor Hussain Shah and Fauji Foundation Model school at a distance of 190 m and 543 m Respectively whereas, Taluka hospital Kot Ghulam Muhammad at a distance of 636 m. A canal is flowing adjacent to proposed subproject site at a distance of 96 m.
21	Rajputh Goth Water Supply Scheme	25°16'51.46"N 69°21'5.33"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Mirpurkhas-Samaro road when moving forward from Mirpurkhas. The number of household and population is 318 & 2227 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and religious facilities around proposed project area like Ghazali Best school Project of Sindh at

No.	Schemes	Coordinates	Site Description
			a distance of 934 m and a masjid at a distance of 128 m. A canal is flowing at a distance of 950 m away from proposed subproject area.
22	Waghreji Water Supply Scheme	25°17'14.75"N 69° 7'39.29"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Mirpurkhas-Samaro road when moving forward from Mirpurkhas to Digri. The number of household and population is 857 & 6000 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational facilities around proposed project area like Govt. Primary school at a distance of 332 m and GGPS sabit Ali Laghari at a distance of 331 m. A canal is flowing in southwest at a distance of 188 m away from proposed subproject area.
23	Yaqoob Pur Water Supply Scheme	E = 432610 N = 2922674	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 318 & 2227 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and religious facilities around proposed project area like Govt. Girls Primary School at a distance of 256 m and a masjid Yaqubpur at a distance of 319 m.
24	Deh-294 Water Supply Scheme	25°14'28.78"N 69°14'48.13"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 251 & 1760 respectively. The area is surrounded by the human settlement and agricultural areas. There are some educational and religious facilities around proposed project area like Govt. Primary School Deh 294 at a distance of 229 m and a masjid at a distance of 154 m.

No.	Schemes	Coordinates	Site Description
25	Dayal Garh Water Supply Scheme	25°10'47.25"N 69°12'43.43"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 454 & 3180 respectively. The area is surrounded by the human settlement and agricultural areas. There is health, educational and religious facilities around proposed project area like Govt. Primary School Dayalgarh at a distance of 310 m, a masjid at a distance of 306 m and a BHU Dayalgarh at 430 m.
26	Kachelo Farm Water Supply Scheme	25°14'51.60"N 69°10'47.31"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 234 & 1640 respectively. The area is surrounded by the human settlement and agricultural areas. There is health, educational and religious facilities around proposed project area like Civil Hospital Kachelo Farm at a distance of 275 m, Govt. High School and GGES Kachelo Farm at a distance of 153 m and 315 m respectively. A canal is flowing on southeastern side at a distance of 1.2 km.
27	Mehar Muhammad Boota Water Supply Scheme	25°12'41.49"N 69°11'33.76"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 874 & 6120 respectively. The area is surrounded by the human settlement, orchards and agricultural areas. There are religious and educational facilities around proposed project area like Masjid Gohr Boota at a distance of 161 m, Govt. Boys High School Mehr M Boota at a distance of 144 m. A canal and River Puraan are flowing on western side at a distance of 209 m and 1.4 km respectively.

No.	Schemes	Coordinates	Site Description
28	Deh-333 Water Supply Scheme	25°16'29.98"N 69°17'29.46"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Mirpurkhas-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 411 & 2880 respectively. The area is surrounded by the human settlement and agricultural areas. There are health and educational facilities around proposed project area like Govt. Girls School at a distance of 316 m, Govt. Dispensary M. Ali Kalro at a distance of 891 m.
29	Longewal Water Supply Scheme	25°15'1.88"N 69°16'36.23"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 357 & 2500 respectively. The area is surrounded by the human settlement and agricultural areas. There is an educational facility around proposed project area i.e., Govt. Girls Middle School Longewal at a distance of 462 m. A canal is flowing at a distance of 128 m.
30	Bodewal Water Supply Scheme	25°12'1.30"N 69°15'54.91"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 246 & 1720 respectively. The area is surrounded by the human settlement and agricultural areas. There are educational and religious facility around proposed project area i.e., Govt. Primary School Bodewal at a distance of 456 m and a masjid Bodewal 345 m away.
31	Nandi Duberji Water Supply Scheme	25°11'26.12"N 69°11'21.92"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Samaro road when moving forward from Digri, Mirpurkhas. The number of household and population is 334 & 2340 respectively. The area is surrounded by the agricultural fields. There are

No.	Schemes	Coordinates	Site Description
			no social sensitive receptors around proposed subproject area the nearest settlement i.e., Yousufabad is 648 m away and River Puraan is flowing 1.2 km far away on western side.
F	**Taluka Digri Water Supply Schemes**		
32	Urban Water Supply Scheme Digri	25° 8'39.56"N 69° 6'35.39"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Tando Bago road when moving from Digri, Mirpurkhas. The number of household and population is 5689 & 39820 respectively. The area is surrounded by the human settlement and agricultural fields. There are educational and religious facilities around proposed subproject like Masjid Baloch Colony at a distance of 180 m and Dr Ghulamullah Jarwar High school 637 m away.
33	Miryar Muhammad Water Supply Scheme	25° 5'27.45"N 69°14'2.56"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Digri-Tando Jan Muhammad road further via Canal road/Khudadad road when moving from Digri, Mirpurkhas. The number of household and population is 470 & 3290 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around except settlements. A River Puraan is flowing 538 m west from proposed subproject area.
34	Kangoro Water Supply Scheme	25°14'11.57"N 69° 2'1.85"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Digri-Mirpurkhas road when moving from Digri, Mirpurkhas. The number of household and population is 302 & 2117 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around except Kangoro BHU at a distance of 544 m.

No.	Schemes	Coordinates	Site Description
35	Deh-194 Water Supply Scheme	25° 2'53.82"N 69°11'37.30"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Tando Jan Muhammad road when moving from Digri, Mirpurkhas. The number of household and population is 368 & 2575 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around except Jamia Masjid Deh 94 at a distance of 263 m.
36	Jio Kaloi Water Supply Scheme	25° 5'51.73"N 69°10'35.28"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Digri-Tando Jan Muhammad road when moving from Digri, Mirpurkhas. The number of household and population is 157 & 1100 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around proposed subproject site.
37	Deh-154 Water Supply Scheme	25°12'40.09"N 69° 1'16.12"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Matli-Tando Ghulam Ali-Digri road when moving towards Digri, Mirpurkhas. The number of household and population is 156 & 1090 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around proposed subproject site except a mosque at a distance of 308 m.
38	Deh-155 Water Supply Scheme	25°13'5.57"N 69° 2'9.70"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Matli-Tando Ghulam Ali-Digri road when moving towards Digri, Mirpurkhas. The number of household and population is 194 & 1360 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around proposed

No.	Schemes	Coordinates	Site Description
			subproject site except Jamia Masjid Mandaranwala at a distance of 278 m.
39	Deh-151 Water Supply Scheme	25°10'55.96"N 69° 0'38.44"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Matli-Tando Ghulam Ali-Digri road when moving towards Digri, Mirpurkhas. The number of household and population is 186 & 1300 respectively. The area is surrounded by the human settlement and agricultural fields. There are no social sensitive receptors around proposed subproject site.
G	**Taluka Jhudo Water Supply Schemes**		
40	Urban Water Supply Scheme Naukot	24°50'52.83"N 69°24'32.40"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the right side via Naukot-Jhuddo road when moving from Digri to Naukot, Mirpurkhas. The number of household and population is 1857 & 13000 respectively. The area is surrounded by the human settlement with commercial activities and agricultural fields. There are educational and healthcare facilities around proposed subproject like Santoro Farm School Naukot at a distance of 160 m and Govt. Primary School santoro Farm 367 m away whereas, Civil Hospital Naukot is 1.7 km far away from proposed subproject site. A canal is flowing from west to east at a distance of 400-800 m.
41	Fazal Bhambhro Water Supply Scheme	24°53'58.52"N 69°27'15.99"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Naukot-Jhuddo road when moving from Digri to Naukot, Mirpurkhas. The number of household and population is 307 & 2150 respectively. The area is surrounded by the human settlement with commercial activities and agricultural fields. There are educational and healthcare facilities around proposed subproject like Government Boys High School Fazal Bhanbharo at a distance

No.	Schemes	Coordinates	Site Description
			of 684 m whereas, BHU Fazal Bhambhro (PPHI) is 277 m far away from proposed subproject site.
H	**Taluka Kot Ghulam Muhammad Drainage Scheme**		
42	Kot Ghulam Muhammad Drainage Scheme	25°17'20.90"N 69°15'21.13"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Mirpurkhas-Samaro road or Digri-Samaro road when moving from Digri or Mirpurkhas City. The number of household and population is 3851 & 26958 respectively. The area is surrounded by the human settlement with commercial activities and agricultural fields. There are educational and healthcare facilities around proposed subproject like Government Girls Higher Secondary School and Govt. Primary School Nagar Thebo at a distance of 442 m and 414 m respectively whereas, Taluka Hospital Kot Ghulam Muhammad is 1.1 km far away from proposed subproject site.
I	**Taluka Jhudo Drainage Schemes**		
43	Urban Drainage Scheme Jhudo (Kachi Disposal	24°58'2.53"N 69°18'12.48"E	The proposed site is located in District Mirpurkhas, it can be easily accessible by National Highway N120 on the left side via Tando Jan Muhammad-Jhuddo road when moving from Digri to Jhuddo Taluka. The number of household and population is 1353 & 9470 respectively. The area is surrounded by the human settlement with commercial activities and agricultural fields. There are no social sensitive receptors around except residential area and Mubarak Masjid at a distance of 40m.

1.3 Sub-Projects Information

1.3.1 Brief introduction to the sub-project, its geographical location, components, and benefits.

The subproject sites are situated in District Mirpurkhas, Sindh, within the Government territory, specifically under the jurisdiction of the Public Health Engineering Department (PHED). The district has seven Talukas; Digri Taluka, Kot Ghulam Mohammad Taluka, Mirpurkhas Taluka, Husain Bukhsh Mari Taluka, Sindhri Taluka, Jhudo Taluka and Shujabad Taluka. The aim is to rehabilitate and restore the water supply and drainage systems that were damaged or destroyed by the floods in 2022. These efforts will prioritize the selected water supply infrastructure, ensuring its recovery. Currently, the community in District Mirpurkhas has been suffering from a lack of safe drinking water and living in unhygienic conditions due to inadequate collection and treatment of storm water, which has led to the complete destruction of the drainage system.

The proposed subproject intends to address these issues by rehabilitating the water supply and drainage schemes to a resilient level. This will guarantee a continuous provision of safe drinking water to the community, while also ensuring the proper collection, treatment, and disposal of storm water in an environmentally friendly manner. The primary source of drinking water in the district is underground and surface water both. The water is extracted from underground or nearby canals using pumps and stored in Low Surface Reservoirs (LSRs) before being distributed to the community. The drinking and wastewater will undergo analysis in a recommended laboratory, and precautionary measures will be taken based on the results. surface water in the form of canals are available in some areas/schemes covered by the subproject. Overall, the proposed project aims to create a healthier environment in the area and uplift the socioeconomic conditions of the residents by providing them with safe water and employment opportunities for the locals.

1.3.2 Details about existing conditions of the area/facility and proposed scope of rehabilitation works.

The water supply and drainage schemes were not up to mark as almost all structures have been damaged by flood, 2022. The tube wells, pumping stations, distribution network and LSRs have been badly affected. As a result of which, the people of District Mirpurkhas are facing scarcity of safe drinking water. Comprehensive surveys have been conducted by the expert to monitor the sites and assessed the damages and restoration of infrastructures. Rehabilitation of damaged infrastructure will provide the capacity and efficiency for uninterrupted safe drinking water supply to the community.

Currently, community of District Mirpurkhas is living in unhygienic condition as drainage system has been broken-down and blocked in flood, 2022. The sewage disposal ponds (SDPs) including pumping stations and drainage network have also been affected. The damages have been assessed through proper survey and rehabilitation work is being made part of Sub-projects PC-1 of District.

The flood damaged the Water Supply and Drainage Schemes which affected the community. The community has been deprived by drinking water facility. Due to broken lines and blockages in the drainage lines wastewater stagnate in the area after rain causes disturbance to the residents. The stagnant water provides breeding grounds to mosquitoes and flies which serve as vector of many diseases in the area. At some places, water supply lines are passing beside the storm water drains which also affect the quality of drinking water. Due to unavailability or insufficient supply of water, community have to fetch water from far flung areas and from pumping stations which creates social stress. Security and privacy of the local people has been disturbed as well. There is a need to rehabilitate the existing damaged water

supply and drainage schemes in order to resolve the socioeconomic issues of the sub project area. The sub-project areas are located in different areas of District Mirpurkhas, the schemes and systems are operated under the Government territory. The activity involves in the subproject is restoration and rehabilitation of damaged Water Supply and Drainage Schemes of District Mirpurkhas.

i. Flora of Sub-Project Area

The common flora observed during survey include neem (Azardirachta indica), pipal (Ficus religosa), babul (Acacia nilotica), siris/ rain tree or sareehan (Albizia lebbeck), eucalyptus or sufaida (Eucalyptus camaldulensis), banyan or burgad (Ficus benghalensis), khejri or long tree or kandi (Prosopis cineraria), velvet mesquite or devi (Prosopis juliflora), and ber or jujube (Zizyphus mauritiana).




Cotton, rice, sugarcane, jowar, bajra, maize, sesanum, wheat, barley, rapeseed & mustard, moong, maash, arhar, masoor, sugar beet, guar seed, linseed, sunflower, and soya been are included in the crops of the district[1].

ii. Fauna of the Sub-Project Area

The animal species has been disturbed due to increase in population of the subproject areas except domestic animals no other specie has been found during surveys.

Avifauna include myna, kingfishers, cattle egret, pond heron, crow, quail, rock pigeons, red-wattled lapwing, house sparrow, bulbuls, parakeets, bee-eaters, doves, partridge.

[1] https://pakistanalmanac.com/sindh-mirpurkhas/#1633497127938-b1d45416-be12

1.3.3 Socio-Economic Condition of the Sub-Project Area

The total population of the district Mirpurkhas is 1,613,506 persons with 46% literacy rate[2]. Majority of the population of the district is Muslim. The culture life of the Muslims is greatly influenced by the Islamic way of life. After Muslims, Hindus also hold great confidence in Thakurs and Brahmans. The Brahmans usually perform spiritual rituals of Hindus on special occasions as observed during sites visits. The languages mostly spoken in District are Sindhi, Brohi, Balochi, Siraiki and Urdu. However, Urdu is understood amongst all the population of district. The economy of Mirpurkhas is mainly based on Agriculture, Livestock Breeding, Fishing & Hunting (62.5%), Construction (15.3%) and Community, Social & Personal Services (20.5%). Major industries in the district Mirpurkhas are Cotton Ginning Factories, Sugar Mills, Flour Mills, Rice Mills and Fiber Plant.

1.3.4 Explain, whether this is purely rehabilitation of existing facilities or will involve any new works

The subproject involves rehabilitation of damaged Drainage and Water Supply Schemes of the existing utilities which are being operated by the PHED. No new work is involved under sub-project scope.

1.3.5 Are consultations with stakeholders conducted?

The social and environmental specialist of construction supervisory consultation-CSC held series of consultation meetings with the local community and relevant stakeholders, residents of the sub-project areas in August-September, 2023. The field team visited the nearby communities briefed salient features of the sub-projects to get the views of the communities who could be affected and beneficiaries. Social Sensitive Receptors like religious structures (mosques, shrines and graveyards), basic/rural health units (BHU/RHU), hospitals, schools, cultural and archeological etc. were observed during the survey and consultation in the sub-project areas. The indirect impacts on the receptors have been evaluated at 200 meters' buffer zone of the proposed sub-project sites. Most of the social receptors are located in an urban settlement and far away from proposed sub-project sites hence would not be affected by project activities. The community was very blissful by the rehabilitation work carried out by the involvement of the Govt. of Sindh. They appreciated for taking up the initiative of rehabilitation and restoration of damaged water supply and drainage schemes. The team assured that all the concerns raised by them would be addressed. Mitigation measures will be proposed to minimize the impacts during rehabilitation activities. According to the community, the rehabilitation works would provide them safe and sufficient drinking water and ensure safe disposal of wastewater. The detailed concerns of community are described in the section 3 of this ESSR.

The damaged utilities are owned by the PHED of District Mirpurkhas. Consultation with Line Department have also been completed. The subprojects were installed in Government owned land and no additional land will be acquired for rehabilitating the sub-projects.

1.3.6 Will this sub-project involve any ancillary impact/ activity away from the work site?

There is no secondary impact in the sub-project areas. All the impacts are minor, temporary and site specific during the rehabilitation/restoration phase. The project falls under the category C which creates minor or low environmental impacts limited to rehabilitation/restoration phase.

[2] https://www.pbs.gov.pk/census-2017-district-wise/results/103

1.3.7 Timeframe for starting and completion of sub-project

The subproject will be started in October, 2023 and will be completed in March, 2025.

1.3.8 Drainage and Water Supply Schemes Design and Demand details

The main rehabilitation or restoration components of water supply schemes are transmission main, low surface reservoir tanks (LSR), existing water storage reservoirs, pump house, staff quarters, water filtration tanks, alternate energy source i.e. (solar system) and compounds walls. The drainage schemes include the rehabilitation of collection drains, screening chambers, collecting tanks, pumping machinery, and drainage disposal pipes.

The capacities of these structures have been designed with respect to population sizes including future growth pattern and water demand & supply of proposed subproject areas. The drawings and typical cross sections of components are provided in **Annexure-2**. However, the current and future drainage generation capacities and water supply demand are given in **Table-2** and **Table-3.**

The tentative details of major equipment, machineries and manpower that will be utilized for upgrading existing structures during rehabilitation works are given below **(Table-1)** However, exact number and quantities will be finalized at the stage of engaging contractors for bids based on the volume of work.

Table 1: Details of Equipment/Machineries and Manpower for Rehabilitation Works

Equipment/Machineries	Quantity	Manpower
Small Concrete Mixers	02	**Skilled:**
Generators	01	Mason, Steel Fixer, Plumber, Electrician,
Dewatering Pumps	02	Carpenter, Machine Operators etc.
Excavators	01	**Unskilled:**
Dumpers	02	Labors, Security Guards etc.
Tractor Trolley	02	
Bowser	01	

Table 2: Population Size and Wastewater Generation of District Mirpurkhas Drainage Schemes

Description	Total Population	Per Capita Sanitation Generation	Sanitation Generation	Total Population	Per Capita Sanitation Generation	Sanitation Generation	Total Population	Per Capita Sanitation Generation	Sanitation Generation
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	GPCD	GPD	Person	GPCD	GPD	Person	GPCD	GPD
F. Taluka Kot Ghulam Muhammad Drainage Scheme									
Kot Ghulam Muhammad Drainage Scheme	26,958	8.8	237230.4	27,910	8.8	245606.1	43,064	8.8	378965.5
I. Taluka Jhudo Drainage Schemes									
Urban Drainage Scheme Jhudo (Kachi Disposal)	9,470	8.8	83336.0	9,804	8.8	86278.3	15,128	8.8	133125.7

Table 3: Population Size and Water Supply Demand of District Mirpurkhas Water Supply Schemes

Description	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	UK GPCD	GPD	Person	UK GPCD	GPD	Person	UK GPCD	GPD
Improvement & Extension for Water Supply Schemes at Various Taluka's of District Mirpurkhas									
A. Taluka Mirpur Khas Water Supply Schemes									
Mirpur Khas Urban Water Supply Scheme	32,574	11.0	358314.0	33,724	11.0	370964.7	52,036	11.0	572391.3
Mir Sher Muhammad Water Supply Scheme	4,668	11.0	51348.0	4,833	11.0	53160.9	7,457	11.0	82026.2

Description	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	UK GPCD	GPD	Person	UK GPCD	GPD	Person	UK GPCD	GPD
Improvement & Extension for Water Supply Schemes at Various Taluka's of District Mirpurkhas									
B. Taluka Shujabad Water Supply Schemes									
Ghulam Muhammad Laghari Water Supply Scheme	1,445	11.0	15895.0	1,496	11.0	16456.2	2,308	11.0	25391.6
Khuda Bux Khatyan Water Supply Scheme	619	11.0	6809.0	641	11.0	7049.4	989	11.0	10877.1
Muhammad Ali Halepota Water Supply Scheme	2,250	11.0	24750.0	2,329	11.0	25623.8	3,594	11.0	39537.1
Muhammad Khan Lashari Water Supply Scheme	1,400	11.0	15400.0	1,449	11.0	15943.7	2,236	11.0	24600.8
Umer Bughio Water Supply Scheme	2,283	11.0	25113.0	2,364	11.0	25999.6	3,647	11.0	40116.9
C. Taluka Hussain Bux Mari Water Supply Scheme									
Khan Water Supply Scheme	4,700	11.0	51700.0	4,866	11.0	53525.3	7,508	11.0	82588.5
Patayoon Water Supply Scheme	3,569	11.0	39259.0	3,695	11.0	40645.1	5,701	11.0	62714.6
Old Mirpur Water Supply Scheme	7,605	11.0	83655.0	7,874	11.0	86608.5	12,149	11.0	133635.3

Description	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	UK GPCD	GPD	Person	UK GPCD	GPD	Person	UK GPCD	GPD
Improvement & Extension for Water Supply Schemes at Various Taluka's of District Mirpurkhas									
Vesro Water Supply Scheme	2,726	11.0	29986.0	2,822	11.0	31044.7	4,355	11.0	47901.4
Aziz Brohi Water Supply Scheme	1,800	11.0	19800.0	1,864	11.0	20499.1	2,875	11.0	31629.7
Dr. Iqbal Narejo Water Supply Scheme	210	11.0	2310.0	217	11.0	2391.6	335	11.0	3690.1
D. Taluka Sindhri Water Supply Scheme									
Hingorno Water Supply Scheme	4,085	11.0	44935.0	4,229	11.0	46521.5	6,526	11.0	71781.7
Girhore Shrief Water Supply Scheme	8,700	11.0	95700.0	9,007	11.0	99078.8	13,898	11.0	152876.7
Din Muhammad Junejo	3,400	11.0	37400.0	3,520	11.0	38720.5	5,431	11.0	59744.9
E. Taluka Kot Ghulam Muhammad Water Supply Scheme									
Kot Ghulam Muhammad City Water Supply Scheme	26,958	11.0	296538.0	27,910	11.0	307007.6	43,064	11.0	473706.8
Rajputh Goth Water Supply Scheme	2,227	11.0	24497.0	2,306	11.0	25361.9	3,558	11.0	39132.9

Description	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	UK GPCD	GPD	Person	UK GPCD	GPD	Person	UK GPCD	GPD
Improvement & Extension for Water Supply Schemes at Various Taluka's of District Mirpurkhas									
Waghreji Water Supply Scheme	26,958	11.0	296538.0	27,910	11.0	307007.6	43,064	11.0	473706.8
Yaqoob Pur Water Supply Scheme	2,227	11.0	24497.0	2,306	11.0	25361.9	3,558	11.0	39132.9
Deh-294 Water Supply Scheme	1,760	11.0	19360.0	1,822	11.0	20043.5	2,812	11.0	30926.8
Dayal Garh Water Supply Scheme	3,180	11.0	34980.0	3,292	11.0	36215.0	5,080	11.0	55879.1
Kachelo Farm Water Supply Scheme	1,640	11.0	18040.0	1,698	11.0	18676.9	2,620	11.0	28818.1
Mehar Muhammad Boota Water Supply Scheme	6,120	11.0	67320.0	6,336	11.0	69696.8	9,776	11.0	107540.8
Deh-333 Water Supply Scheme	2,880	11.0	31680.0	2,982	11.0	32798.5	4,601	11.0	50607.5
Bodey Wall Water Supply Scheme	1,720	11.0	18920.0	1,781	11.0	19588.0	2,748	11.0	30223.9
Nandi Duberji Water Supply Scheme	2,340	11.0	25740.0	2,423	11.0	26648.8	3,738	11.0	41118.6

Description	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	UK GPCD	GPD	Person	UK GPCD	GPD	Person	UK GPCD	GPD
Improvement & Extension for Water Supply Schemes at Various Taluka's of District Mirpurkhas									
G. Taluka Digri Water Supply Schemes									
Urban Water Supply Scheme Digri	39,820	11.0	438020.0	41,226	11.0	453484.8	63,611	11.0	699718.3
Miryar Muhammad Water Supply Scheme	3,290	11.0	36190.0	3,406	11.0	37467.7	5,256	11.0	57812.0
Kangoro Water Supply Scheme	2,117	11.0	23287.0	2,192	11.0	24109.2	3,382	11.0	37200.0
Deh-194 Water Supply Scheme	2,575	11.0	28325.0	2,666	11.0	29325.0	4,113	11.0	45248.0
Jio Kaloi Water Supply Scheme	1,100	11.0	12100.0	1,139	11.0	12527.2	1,757	11.0	19329.2
Deh-154 Water Supply Scheme	590	11.0	6490.0	611	11.0	6719.1	942	11.0	10367.5
Deh-155 Water Supply Scheme	960	11.0	10560.0	994	11.0	10932.8	1,534	11.0	16869.2
Deh-151 Water Supply Scheme	1,300	11.0	14300.0	1,346	11.0	14804.9	2,077	11.0	22843.6
H. Taluka Jhudo Water Supply Schemes									
Urban Water Supply Scheme Naukot	13,000	11.0	143000.0	13,459	11.0	148048.8	20,767	11.0	228436.4

Description	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand	Total Population	Per Capita Water Demand	Water Supply Demand
	2023			2025 (First Operational Year)			2050 (Last Operational Year)		
	Person	UK GPCD	GPD	Person	UK GPCD	GPD	Person	UK GPCD	GPD
Improvement & Extension for Water Supply Schemes at Various Taluka's of District Mirpurkhas									
Fazal Bhambhro Water Supply Scheme	2,150	11.0	23650.0	2,226	11.0	24485.0	3,435	11.0	37779.9

1.3.9 **Would rehabilitation works done by considering the climate resilient factor?**

The restoration and rehabilitation efforts prioritize climate resilience to enhance structural durability. To ensure this, civil works have been designed based on engineering design standards and ACI codes. The main goal of the subproject is to enhance resilience through a "build back better" approach. Key elements, like the pump house and compound walls, are designed with free board to withstand floods by raising them above flood levels. To address electricity shortages in remote Sindh areas, a resilient solar power system will be mounted on elevated structures to protect against flood damage. Additionally, the use of HDPE material for the rising main ensures long-term viability

1.3.10 Scenario if there are any alternative designs options of sub-project

Here are some alternative approaches considered earlier for water supply and drainage systems but not opted for because the scope of proposed project which is to rehabilitate the existing water supply and drainage network infrastructure. On the other hand, these options require high maintenance, less cost effective and not feasible in the current scenario.

Rainwater Harvesting: Implementing rainwater harvesting techniques can help collect and store rainwater for later use. This alternative reduces the reliance on underground sources and provides a sustainable water supply.

Grey water Recycling: Instead of disposing of grey water from sinks, showers, and washing machines, it can be treated and reused for non-potable purposes such as toilet flushing or irrigation. This approach reduces the strain on freshwater resources and promotes water conservation.

Decentralized Water Treatment Systems: Instead of relying on a centralized water treatment plant, decentralized systems can be established at the community level. These systems utilize small-scale treatment methods such as filtration, disinfection, and purification to provide safe drinking water to local residents.

Sustainable Drainage Systems (SDS): SDS employ environmentally friendly techniques to manage storm water runoff. This includes features like permeable pavements, green roofs, and rain gardens that help absorb and filter rainwater, reducing the burden on drainage systems and preventing flooding.

Water Efficiency Measures: Promoting water-efficient practices and technologies, such as low-flow fixtures, dual-flush toilets, and water-efficient appliances, can significantly reduce water consumption in households, industries, and public facilities.

Desalination: In areas where freshwater resources are scarce, desalination plants can be utilized to convert brackish into potable water. Although this option requires substantial investment and energy, it provides an alternative water source for regions facing severe water shortages.

Water Reuse and Reclamation: Implementing advanced water treatment processes can enable the reuse of treated wastewater for various non-potable applications, such as irrigation, industrial processes, and groundwater replenishment. This approach reduces the demand for freshwater resources.

Aquifer Recharge: Managed aquifer recharge involves intentionally infiltrating excess surface water into underground aquifers, replenishing depleted groundwater resources. This technique helps to stabilize water levels and improve the sustainability of water supply systems.

Community-Based Water Systems: Engaging local communities in the planning, implementation, and maintenance of water supply and drainage systems can foster a sense of ownership and ensure sustainability. This approach empowers communities to take responsibility for their water resources.

Integrated Water Management: Adopting a holistic approach that considers the entire water cycle, including water supply, wastewater treatment, storm-water management, and water conservation, can lead to more efficient and sustainable water management practices.

It's important to assess the specific conditions, needs, and feasibility of each alternative before implementing them in a particular project or region.

2 ENVIRONMENTAL AND SOCIAL SCREENING TOOLS

2.1 Environmental and Social Management Screening

Project Area	Mirpurkhas District of Sindh, Pakistan
Project Title	Sindh Flood Emergency Rehabilitation Program (SFERP), P&DD Component, Sindh
Sub-project Title	Rehabilitation of Damaged Water Supply and Drainage Schemes

Table 4: Environmental and Social Screening Checklist

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
	A. Project Siting							
1.	Adjacent to or within any environmentally sensitive areas like Archeological/Cultural heritage site, Protected Forests, Wetlands, Wildlife Sanctuaries, Game Reserves etc.?	□	√	√	□	□	□	No environmental sensitive or cultural heritage site is in the vicinity of these project areas.
2.	Adjacent to or within any Buffer zone of protected area	□	□	√	□	□	□	No buffer zone viz. a sanctuary, forest, national park in its immediate surroundings. A few wild vegetation and trees were found at outside of the proposed boundaries which will not be disturbed during the project activities.
3.	Are there any potential pollution sources in water supply network?	√	□	□	□	□	□	Yes, there are few potential pollution sources in the water supply network due to no maintenance and flood affects like damages to the

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								existing infrastructure as the structures are old and material of existing structure could not stand with flood. The construction work will solely focus on rehabilitation and improvement of the existing system.
4.	Are there any potential sources that can damage drainage network? Or Is it affected by flood?	√	□	□	□	□	□	Natural disasters like flood and intensification in the urban population are the main factors for the destruction of existing drainage network. The scope of the proposed schemes is to rehabilitate the existing drainage network to resist with floods and cater the demands properly.
5.	Is there a possibility that the project will adversely affect the local landscape?	□	√	□	□	□	□	Local landscape will not be affected by the subproject activities because it doesn't involve establishing of new infrastructure.
6.	Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions?	□	√	□	□	□	□	The project sites or discharge areas are not located in protected areas designated by the country's laws or any international treaties and conventions.
	B. Potential Impacts at Construction Phase							
7.	Will construction camp site cause land clearing and tree be cutting?	□	√	□	□	□	□	No construction camp will be constructed; existing built-in structures will be utilized as camp site. Also, it will not cause any land clearing and tree cutting activity as the subproject activities will involve upgrading existing structures.
8.	Will construction works create any disturbance/ hindrance/obstruction	□	√	□	□	□	□	No such issue of mobility/accessibility issues will be caused during the sub-project development. Few vehicles on specific timings will be used

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
	for public movement/access?							during construction work which will not increase traffic on road. **Mitigation Measures:** • Reduce traffic speeds on all unpaved surfaces to 15 km/ hour or less. • Contractor will strictly implement speed limits and defensive driving policies. • Traffic control will be maintained work sites. • Contractor machinery and equipment will not hamper the traffic at main road and sites. • Necessary training, information will be provided to the workers regarding traffic rules.
9.	Is there any sensitive receptor (school, mosque, health unit, community very close to the scheme) that will be impacted due to construction activities?	√	□	□	□	□	□	Some social sensitive receptors might be affected indirectly due to dust, noise or construction vehicles movements but suggested mitigations will reduce it effects. **Mitigation Measures:** • GRM must be communicated to the internal staff and the general public. Community grievances will be recorded and responded to on an urgent basis. • Provision of proper safety and diversion signage, particularly at socially sensitive receptors areas; • Ensure the placement of a proper sign board that the site is restricted from the entry of irrelevant people particularly children;

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• Timely public notification on planned construction works should be communicated to the communities; • Setting up speed limits in close consultation with the traffic police with luminescence sign boards.
10.	Will construction activities require tree cutting?	□	√	□	□	□	□	No such activity will be done and if needed then for every tree that needs to be cut down, five saplings of approved tree species will be planted, emphasizing reforestation and the replenishment of tree cover.
11.	Will construction activities result in damaging existing local roads, bridges or other infrastructure?	□	√	□	□	□	□	The Sub-project activities do not involve damage to any nearby and existing road, bridge and any other infrastructure. The rehabilitation activities are limited to the demarcated boundary of existing facilities of WS & DS.
12.	Will construction activities generate noise?	√	□	□	□	□	□	Yes, noise will be generated from various sources such as plumbing, drilling, generators, rehabilitation activities and vehicular movement that will be limited to the proposed boundary of the sub-project and nearby community will not be affected. **Mitigation Measures:** • The contractors would ensure keeping noise levels from construction vehicles and machinery to be within safe limits. • Construction activities will not be allowed at nighttime. • Noisy machines and vehicles will not be allowed to be used at the sub project sites (noise level will not be more than 85 dBA at 7.5 m distance), properly tuned machinery and vehicles will be allowed only.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• Workers will use noise protection equipment when working in a noisy area. • Notifying and coordinating with locals adjacent to project area prior to construction to inform them of the possibility of temporary noise disruption, and how to report noise complaints in accordance with the proposed GRM. The contractor will adhere to the requirements of the mitigation plan contained in the contract documents with true spirit and regular monitored as per SEQs.
13.	Will construction activities generate dust?	√	□	□	□	□	□	There will be construction vehicles and machines which may generate dust emissions. The machinery used in rehabilitation work will be tractors and trolleys for fetching material. **Mitigation Measures:** • Regular water sprinkling will be the responsibility of the contractor at the dust generation points during construction activities. Water will also be sprinkled at vehicular and machinery movement routes and sensitive receptor's location to avoid dust spreading to the nearby community. • Necessary PPE i.e., face mask will be provided to workers. • Contractor will ensure that dust emissions due to vehicular traffic are minimized by reducing the speed. • Well maintained and tuned vehicles will be used for the transportation and disposal of material.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
14.	Will construction activities cause air pollution due to stack emissions from generators, construction machines and vehicles?	□	√	□	□	□	□	The activities include rehabilitation of damaged water and drainage schemes in which air pollution at minor extent during the rehabilitation work will be caused. **Mitigation Measures:** • The emissions from generators, (if used) and vehicular/machinery movement at the site can affect the ambient air quality at sub project sites. It will be the responsibility of the contractor to use well maintained generators and vehicles/machines to keep ambient air quality within the desired level. The contractor will be obliged to provide fitness certificate/maintenance records of the generators, vehicles and machines before deploying them at the construction sites.
15.	Will construction activities cause soil pollution?	□	√	□	□	□	□	During construction work, various mitigation measures can be employed to address soil pollution. **Mitigation Measures:** • Implementing barriers and containment systems to prevent the spread of pollutants from construction sites to surrounding soil. • Ensuring proper disposal of construction waste, including hazardous materials, to prevent soil contamination. This involves following appropriate waste management procedures and regulations.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• Implementing spill prevention measures and having protocols in place to quickly respond to any accidental spills of chemicals or pollutants that could contaminate the soil. • Contaminated soil management: If contaminated soil is encountered during construction, proper management procedures would be followed, including containment, removal, and disposal in accordance with local regulations. • Regular monitoring: Conducting regular soil quality monitoring throughout the construction process to detect any signs of pollution and take corrective actions promptly. • Providing training to construction personnel regarding the importance of soil protection and pollution prevention measures to ensure their active participation in maintaining a pollution-free construction site. By implementing these mitigation measures, construction activities can minimize soil pollution and contribute to environmental sustainability.
16.	Will construction activities generate construction debris?	√	□	□	□	□	□	Yes, as the sub-project will involve civil works for the development of Water Supply and Drainage Schemes, which may generate a very small quantity of construction debris. **Mitigation Measures:** • The debris (rejected material) and WS&DS broken materials produced during construction would be disposed-off in Government approved/allocated disposal sites by engaging third party which is certified from SEPA. Leftover material would not be dumped into

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								storm water drains or watercourses, because such practices can clog these man-made and natural drainage systems and cause many other problems for the residents/Local Commuters.
17.	Will construction activities generate hazardous solid waste?	□	√	□	□	□	□	No hazardous waste will be generated during construction phase of the project.
18.	Will construction take place near to water bodies? Or cause contamination of the surface water resources	□	√	□	□	□	□	Yes, there are a few water supply schemes that are near to surface water bodies like canals. The potential impacts of water pollution during the construction can be minimized, helping to protect water resources and aquatic ecosystems in the surrounding area. **Mitigation Measures:** • Contractor must provide the following facilities at each campsite: Latrines; lined washing areas; septic tanks, and soaking pits for toilet waste. • Soak pits will be built in absorbent soil and located 250 m away from a surface water source or groundwater well. • Diesel, oil, and lubricants should be properly stored following petroleum regulations. This will be the responsibility of the contractor. • Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets; • Conduct surface water quality inspection according to the Environmental and Social Management and Monitoring Plan while adhering to SEQS 2016 and WHO standards.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
19.	Will construction activities take place near wastewater/ storm water drains and how quality of wastewater will be ensured?	√	□	□	□	□	□	Yes, the sub-projects are rehabilitation of water supply and drainage schemes but it will upgrade or restore the existing structures. Wastewater quality analysis will be performed complaint to SEQS 2016 so that contamination or exceedances could be monitored.
20.	Will construction activities result in damaging or relocating the utilities at site like electricity, gas, telecommunication etc.?	□	√	□	□	□	□	Neither relocation nor destruction of utilities will be involved in the construction scope. However, the sub-project scope is already restoration and rehabilitation of WS&DS of the proposed subproject area.
21.	Will construction activities involve excavation?	√	□	□	□	□	□	The excavation will be done for the foundation works of pump house, disposal stations/drainage works, boundary walls, collecting tanks and screening chambers. **Mitigation Measures:** • The excavation will be done carefully to avoid the damages. • Excavation area will be barricaded. • Contractor will use safety signs to warn and aware the local people during construction activities. • Contractor will be ensured availability of adequate Personal Protective Equipment (PPE) at the sub-project sites. • Risk assessment will be carried out by contractor before initiation of excavation work.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• The contractor will ensure that all workers on site will be properly trained and certified to handle an excavation machine.
22.	Will construction involve heavy machinery?	□	√	□	□	□	□	No, despite few machines like excavators will be used for the civil works on need basis; however, the contractor will ensure safety precautions during construction phase of the sub-projects.
23.	Will construction activities/machines be the safety hazards for the workers or any anticipated OHS impacts?	√	□	□	□	□	□	Yes, Occupational Health & Safety issues are anticipated from the proposed rehabilitation work and mitigation measures have been proposed below. Risk can occur from machinery usage, vehicles, and civil work activities. General occupational hazards that may be encountered (e.g., moving machinery and motorized equipment, working at heights, repetitive motions, falling of objects, injuries etc. **Mitigation Measures:** • Ensure and strictly implement the SOPs regarding communicable diseases including daily body temperature check, PPEs, emergency response, and drills. • Unauthorized personnel will not be allowed to enter project site without permission and safety permits. • Assess the hazards associated with the required works and prepare and follow the safety procedures required for the specific works such as electrical works and works at height.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• 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. • Contractor will install safety signs and markings to demarcate the construction zone. • Contractor will ensure provision of controlled access points for the prevention of an unauthorized access to the site. The Contractor will maintain a record of the persons who enter or exit from the sub-project site.
	C. Potential Social Impacts During Design and Construction							
24.	Will involuntary resettlement cause by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	□	√	□	□	□	□	There will be no involuntary resettlement because sub-project sites are located in Government own land.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
25.	Will there a possibility that the project adversely affects the living conditions of inhabitants?	□	√	□	□	□	□	The proposed subproject will positively impact inhabitants and improve their social wellbeing. There is no possibility that the project will adversely affect the living conditions of inhabitants.
26.	Will the construction cause any labor issues such as labor living and working conditions?	√	□	□	□	□	□	Labor condition or rights related issues will be complied such as working hours, leaves, benefits, wages, and other related facilities like provision of foods, clean water, transportation etc. However, no labor camps are anticipated as it involves small scale activities which doesn't involve any living conditions. **Mitigation Measures:** • The Workers' Grievance Redress Mechanism (GRM) will be developed and communicated among workers to lodge complains. • Workers should be provided with clean drinking water for free.
27.	Will construction activities cause community Health and Safety issues? Or any other such impacts.	□	√	□	□	□	□	No such impacts are anticipated, though following will be applicable to the project activities. **Mitigation Measures:** • GRM must be communicated to the general public. • Close consultation with local communities to identify optimal solutions where needed. Community grievances will be recorded and responded to on an urgent basis. • Contractor shall give preference to local community members in subproject areas, to the extent feasible, with respect to the employment of unskilled labor.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• No Hazardous and non-hazardous waste will be dumped outside any community. • 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 dangers or hazards. Dangers and hazards should be cordoned off immediately.
28.	Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure?	√	□	□	□	□	□	Local Stakeholders have been consulted and their comments mentioned in stakeholders' consultation have been noted which will be addressed with true spirit during construction phase.
29.	Will the construction activities cause the socio- cultural issues or conflicts among workers and communities?	√	□	□	□	□	□	• Contractor should take proper measures and raise awareness among the communities and workers to address and resolve issues relating to harassment, intimidation (particularly those related to issues of labor influx), and exploitation, especially against women. • Measures to prevent Gender based violence (GBV), Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH) the Contractor must include relevant clauses in the workers' code of conduct.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• Workers should not be allowed to crowd in the residential communities nearby the site.
30.	Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	√	□	□	□	□	□	Yes, as the security guards will be deployed at subproject sites and they are not allowed to move outside or provide entrance to anybody without permission of the site engineer.

NR: Not Relevant

1. No or Minor Impact
2. Moderate, Short Term, Reversible Impact
3. Severe, Long Term, Irreversible Impact

	Category	A	B	**C**
	Environmental Management Required	N/A	N/A	√
	Type of Environmental Management Tool to be Used	**Social and Environmental Screening Checklist**		

3 STAKEHOLDER CONSULTATION

Stakeholder consultation during a construction project is crucial for ensuring transparency, addressing concerns, and promoting collaborative decision-making.

Table 5: List of Stakeholders Consulted for Water Supply and Drainage Schemes of Mirpurkhas

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
A	**Taluka Mirpurkhas Water Supply Schemes**			
1	Mirpur Khas Urban Water Supply Scheme	25°30'39.63"N 69° 0'48.15"E	Satellite Town Block No 3	23/8/2023
2	Mir Sher Muhammad Water Supply Scheme	25°30'45.28"N 69° 1'34.11"E	PM Colony Satelite Town	23/8/2023
3	Mirpurkhas city east jamrao Water Supply Scheme	25°33'24.00"N 69° 5'23.52"E	Goth Jamrao	23/8/2023
4	Mirpurkhas city west jamrao Water Supply Scheme	25°35'11.06"N 68°54'4.43"E	Goth Haji Muhammad Ali Bizenjo Deh 104	23/8/2023
B	**Taluka Shujabad Water Supply Schemes**			
5	Ghulam Muhammad Laghari Water Supply Scheme	25°19'21.83"N 69° 2'34.77"E	Goth Chaudhry Ghullam Mohammad	24/8/2023
6	Khuda Bux Khatyan Water Supply Scheme	25°25'23.52"N 69° 4'1.31"E	Goth Wali Muhammad Khatyaan	24/8/2023
7	Muhammad Ali Halepota Water Supply Scheme	25°27'59.81"N 69° 5'27.34"E	Goth Haji Muhammad Ali Halepota	24/8/2023
8	Muhammad Khan Lashari Water Supply Scheme	25°25'23.49"N 69° 7'52.12"E	Goth Sanajr Khan Lashari	24/8/2023
9	Umer Bughio Water Supply Scheme	25°26'42.30"N 68°57'8.83"E	Goth Haji Muhammad Umer Bughio	24/8/2023
C	**Taluka Hussain Bux Mari Water Supply Scheme**			
10	Khan Water Supply Scheme	25°37'0.91"N 68°57'18.07"E	Khan Goth	25/8/2023
11	Patayoon Water Supply Scheme	25°44'10.87"N 68°57'9.80"E	Goth Patoyun	25/8/2023
12	Old Mirpur Water Supply Scheme	25°34'25.49"N 69° 3'59.18"E	Purani Mirpur Khas	25/8/2023
13	Old Mirpur Intake Water Supply Scheme	25°34'15.44"N 69° 4'4.09"E	Purani Mirpur Khas	25/8/2023
14	Vesro Water Supply Scheme	25°32'24.21"N 69° 5'27.13"E	Vesro Purano Goth	25/8/2023
15	Aziz Brohi Water Supply Scheme	25°32'43.79"N 68°53'48.67"E	Goth Aziz Brohi	25/8/2023
16	Dr. Iqbal Narejo Water Supply Scheme	25°40'28.21"N 69° 0'50.33"E	Goth Dr. Iqbal Narejo	25/8/2023
D	**Taluka Sindhri Water Supply Scheme**			
17	Hingorno Water Supply Scheme	25°43'58.27"N 69°10'29.89"E	Goth Hingorono	26/8/2023
18	Girhore Shrief Water Supply Scheme	25°34'57.98"N 69°21'11.90"E	Goth Girhor Sharif	26/8/2023

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
19	Din Muhammad Junejo	25°43'16.89"N 69° 7'2.33"E	Goth Khan Sahab Din Mohammad Junejo	26/8/2023
E	**Taluka Kot Ghulam Muhammad Water Supply Scheme**			
20	Kot Ghulam Muhammad City Water Supply Scheme	25°17'20.90"N 69°15'21.13"E	UC Khair Muhammad Bhurgari	26/8/2023
21	Rajputh Goth Water Supply Scheme	25°16'51.46"N 69°21'5.33"E	Rajpoot Goth	26/8/2023
22	Waghreji Water Supply Scheme	25°17'20.90"N 69° 7'46.55"E	Village Dodo Khan	28/8/2023
23	Yaqoob Pur Water Supply Scheme	25°12'59.02"N 69°14'11.57"E	Goth Yaqoobpur	28/8/2023
24	Deh-294 Water Supply Scheme	25°14'28.78"N 69°14'48.13"E	Deh Number 294	28/8/2023
25	Dayal Garh Water Supply Scheme	25°10'47.25"N 69°12'43.43"E	Goth Dayalgarh	28/8/2023
26	Kachelo Farm Water Supply Scheme	25°14'51.60"N 69°10'47.31"E	Goth Deh 271 Taluka	28/8/2023
27	Mehar Muhammad Boota Water Supply Scheme	25°12'41.49"N 69°11'33.76"E	Goth Mehar Muhammad Boota	29/8/2023
28	Deh-333 Water Supply Scheme	25°16'29.98"N 69°17'29.46"E	Deh 333	29/8/2023
29	Longewal Water Supply Scheme	25°15'1.88"N 69°16'36.23"E	Goth Longewal	29/8/2023
30	Bodewal Water Supply Scheme	25°12'1.30"N 69°15'54.91"E	Goth Sikaryari Bodewal	29/8/2023
31	Nandi Duberji Water Supply Scheme	25°11'26.12"N 69°11'21.92"E	Goth Yousufabad	29/8/2023
F	**Taluka Digri Water Supply Schemes**			
32	Urban Water Supply Scheme Digri	25° 8'39.56"N 69° 6'35.39"E	Baloch Colony	30/8/2023
33	Miryar Muhammad Water Supply Scheme	25° 5'27.45"N 69°14'2.56"E	Goth Mir Yar Muhammad	30/8/2023
34	Kangoro Water Supply Scheme	25°14'11.57"N 69° 2'1.85"E	Kangoro Goth	30/8/2023
35	Deh-194 Water Supply Scheme	25° 2'53.82"N 69°11'37.30"E	Deh No.194	30/8/2023
36	Jio Kaloi Water Supply Scheme	25° 5'51.73"N 69°10'35.28"E	Goth Jio Kalaoi	31/8/2023
37	Deh-154 Water Supply Scheme	25°12'40.09"N 69° 1'16.12"E	Deh No.154-A	31/8/2023
38	Deh-155 Water Supply Scheme	25°13'5.57"N 69° 2'9.70"E	Deh No.155 Mandranwala	31/8/2023
39	Deh-151 Water Supply Scheme	25°10'55.96"N 69° 0'38.44"E	Goth Deh 151	31/8/2023

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
G	**Taluka Jhudo Water Supply Schemes**			
40	Urban Water Supply Scheme Naukot	24°50'52.83"N 69°24'32.40"E	Mir Waqar Colony	1/9/2023
41	Fazal Bhambhro Water Supply Scheme	24°53'58.52"N 69°27'15.99"E	Goth Fazal Bhambhro	1/9/2023
H	**Taluka Kot Ghulam Muhammad Drainage Scheme**			
42	Kot Ghulam Muhammad Drainage Scheme	25°17'20.90"N 69°15'21.13"E	Kot Ghulam Muhammad	26/8/2023
I	**Taluka Jhudo Drainage Schemes**			
43	Urban Drainage Scheme Jhudo (Kachi Disposal	24°58'2.53"N 69°18'12.48"E	Jhuddo Town	1/9/2023

3.1 Community Concerns

Comments /Observations	Action /Response
Discussion regarding the importance and usefulness of rehabilitation of water supplies and drainage schemes was held.	The participants were briefed that the proposed Water Supply & Drainage Schemes will provide safe drinking water and updated drainage system which will uplift the socio-economic condition of the areas.
Community members showed concerns about the overall impact of the water supply and drainage schemes on public health and sanitation.	Community was explained the positive health outcomes associated with improved access to clean water, proper sanitation facilities, and effective drainage systems. Any specific health concerns raised by the community and outline measures taken to ensure public safety will be addressed properly.
Community members were asked about the problems and issues they had faced after flood or during monsoon season.	They informed the team that there is serious load shedding issue in the area which is a major cause of destruction of current water supply and drainage system. Pumps and rising mains issues must be resolved as well as cleaning of drains must be done on usual basis. Solar panels are installed but most of them are out of order due to lack of maintenance issue.
Stakeholders/ Local Community members asked about the operations of Water Supply & Drainage Schemes.	The team responded that safe drinking water will be provided to the community without any interruption and storm water will be disposed of in safe manners.
Local Community inquired about the project execution and its completion.	The technical team replied that the project will be commenced in October, 2023 and will be completed in April, 2025. The rehabilitation work will be limited to the existing facilities of the proposed project area and it will be completed in 18 months.
The community urged to provide of semi-skilled and unskilled jobs for local labor.	Unskilled jobs will be given to local's people where possible.
In the sub-project area, women fetch water from a distance of 2-4 km. After completing their morning chores, some of them also bring their livestock to the watercourses for drinking. Some community members showed their reservation that privacy of the local communities might not be compromised.	It was explained that local labor will be hired to execute the project and all employees will be trained to take care of local norms/culture and privacy of people. No interaction of labor with women and children would be happened.

Community members showed reservation about the long-term maintenance and sustainability of the water supply and drainage schemes.	Community was apprised about that PHED is overseeing the project, the Department will ensure operation and maintenance plans, and any measures taken to ensure the infrastructure's long-term viability. All the Schemes under rehabilitation have operational staff hired by the GoS.
Community also raised concerns about the construction activities associated with water supply and drainage schemes can cause disruptions to daily life, including noise, dust, traffic congestion, and temporary service interruptions.	Community was assured that these disruptions will be minimized to the extent possible, provide a clear timeline of the construction activities, and communicate any alternative arrangements made to mitigate inconveniences.
Community had reservations about the proper maintenance of rehabilitated system and no availability of resources.	Community was informed that after rehabilitation works the system will be handed over to PHED who do proper maintenance and resource utilization.
Community requested to conduct a comprehensive needs assessment to understand the water supply and drainage network gaps and challenges faced by the community.	Community was intimated that the proposed subproject is going to be implemented after the detailed need assessment and damages caused by flood.
	
Goth Hingorono, Taluka Sindhri, Mirpurkhas	**Goth Fazal Bhambhro, Taluka Jhuddo, Mirpurkhas**

Goth Patoyun, Taluka Hussain Bux Marri, Mirpurkhas

Deh Number 294, Taluka Goth Ghulam Ali, Mirpurkhas

Deh No.155 Mandranwala, Taluka Digri, Mirpurkhas

Goth Haji Muhammad Ali Halepota, Taluka Shujabad, Mirpurkhas

Figure 2: Stakeholders Consultation

3.2 Institutional Consultation

The Environment and Social team conducted consultations with concerned Government Department in September, 2023. The team briefed the officers of Government Departments regarding the salient features of the proposed sub-projects. It was informed that the "Detailed Design of the Project, under PIU-SFERP-P&DD being implemented and funded by the World Bank. They were informed that the project intends to rehabilitate the damaged Water Supply and Drainage Schemes destroyed in flood 2022. The primary goal of the project is to meet the present and future requirements regarding provision of safe drinking water and drainage system. It was also briefed that the project will bring positive impacts on the lives of the local population.

According to the officials, the rehabilitation/restoration of the proposed Schemes will be beneficial for the residents of the project regions. The officials expressed their support for the planned project during the meeting and assured their full cooperation as a Line Department.

Sr. No	Department
1.	XEN PHED Department
2.	Deputy Director SEPA
3.	Representative of Municipal Administrator

Table 6: Summary of Concerns Raised by Institutional Stakeholders

Comments/Observations	Actions/ Responses
The majority of the stakeholders showed positive attitudes toward the rehabilitation of water supply and drainage schemes.	In general, the participants were in favor of the project and agreed that it is greatly needed because Water Supply and Drainage Schemes have been dilapidated in devastated floods 2022.
Detailed discussions were held regarding the environmental and social issues of the area due to proposed rehabilitation activity.	The project will not cast adverse impact on population, flora and fauna of the area. The project lies in Govt. owned land and no major social and environmental issues are anticipated during construction phase of the project. However, mitigation measures will be proposed to combat environmental degradation.
The stakeholders suggested that the establishment of the proposed project would uplift the socio-economic condition of the community in the project areas.	The team acknowledged and responded that the proposed Water Supply and Drainage Schemes will be beneficial for community residing in the area. The living standard of the community would be elevated after rehabilitation of the schemes.
The stakeholders suggested that care must be given to protect fauna and flora during the construction phase.	The plantation would be undertaken with the preference of local species; no exotic species will be promoted. No cutting of trees will be involved during the execution of the project activities. Plantation activity will be done around the boundary wall to enhance aesthetic beauty of the project area. It will be monitored to cut minimum number of trees. At few sites, trees will be cut or chopped and 1:10 trees will be planted in compensation

Comments/Observations	Actions/ Responses
	and the Line Department would be responsible for caring the newly planted trees after construction phase.
The Stakeholder shows their concern regarding the impacts during the construction stage on waste management and land acquisition	Social and environmental teams briefed about the mitigation measures will be adopted to control dust, noise, health, and safety issues. Excess material will be removed and flattened. There are no issues regarding land acquisition, the land is vacant and owned by the Government. If the issues occur, then these matters will be dealt with Revenue Department.
The stakeholders suggested to engage local people during project activities and considering the women privacy that not be affected.	The teams responded that locals will be considered during construction activities while during operation priority will be given to the locals if not available then will be sourced from other regions. There are no settlements near the proposed projects, therefore, conflicts with the community and women are not expected. It was assured that norms, ethics and traditions of community will not be disturbed.




Figure 3: Institutional Consultation

4 ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN

The purpose of the ESMMP for the rehabilitation works is to ensure that all necessary identified measures should be adopted during construction and operation phase for all schemes to protect the environment and social situations and to comply with the country's environmental and social legislation and applicable World Bank standards. After the preparation of ESMF, PIU has outlined site-specific EMP for the Contractors and executing agency.

Table 7: Environmental and Social Management and Monitoring Plan (ESMMP)

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
1.	**Land Use**	**Construction Phase** Civil Works **Operation Phase** None	- The work will be carried out in the land of PHED which comprised of rehabilitation work only. - No need to clear land or cutting of trees is envisaged.	NA	None
2.	**Dust Emission**	**Construction Phase** Movement of construction vehicles. **Operation Phase** None	- Water will be sprinkled daily or when as required to avoid the dust emission near proposed project vicinity. - For dust control, cordon off the construction area through dust control net.	Daily during Construction Phase	**Construction phase** Contractor
3.	**Noise Emission**	**Construction Phase** Construction Equipment, Generator, Vehicle Movement **Operation Phase** None	- Proper design, maintenance and repair of construction machinery and equipment will be ensured.	Twice a month during Construction Phase	**Construction phase** Contractor

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
4.	**Water Management**	**Construction Phase** Construction activities Water sprinkling for dust minimization **Operation Phase** Supply of water and maintaining its quality will be managed by the PHED	- Contractor will handle and manage waste generated from the construction activities without contamination to natural environment/water bodies and it will reduce risk to general public who stay close to sites. - Water contamination during construction will be avoided through proper disinfection. - Excess use of water will be avoided and monitored in routine basis. - Water Tankers/water bowsers and bore water will be proposed for the utilization of water during project activities. - Clean and safe drinking water will be provided to the workers during working hours.	- Daily during Construction Phase - Water quality analysis at the beginning and end of construction phase	**Construction phase** Contractor **Operational phase** PHED
5.	**Ecological Impact**	**Construction Phase** Construction activities Clearance of top Soil No habitat loss	- As the subproject develops, plantation is grown in and around the subproject vicinity as a CSR.	None	None

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
		No tree cutting at site **Operation Phase** None			
6.	**Solid Waste Management**	**Construction Phase** In construction phase, cement bags, woods remain, debris will be generated. **Operation Phase** Food Waste and Recyclables Material like; paper, plastic etc.	- Waste reduction methodologies will be implemented. - On spot segregation will be ensured. - Covered bins shall be ensured. - Separate Bins for recyclable material and other type of solid waste shall be ensured. - Ensure the disposal of waste properly from the site on daily basis to avoid odor and maintained the site esthetics. - Food waste will be disposed of separately. - Waste inventory of hazardous and non-hazardous waste generated will be prepared and periodically updated. - Scrap metal waste generated from designing and construction	Daily during Construction Phase	**Construction phase** Contractor **Operational phase** PHED

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
			activities will be collected and stored separately in a waste yard and sold to local recyclers for reuse purposes. - Solid waste generated during construction and operation activities will be segregated disposed of appropriately. - Waste will be disposed of properly at designated disposal area. - Food waste and recyclables viz. paper, plastic, glass etc. will be stored in designated waste bins /containers. The recyclables will be periodically sold to local recyclers while food waste will be disposed through proper waste handling mechanism. - Separate bins with symbols shall be placed at construction area. - Secondary containment shall be ensured to avoid the leakages and seepages. - Waste disposal will not be allowed		

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
			in agriculture lands.		
7.	**Soil and Land Contamination**	**Construction Phase** No any chemical or hazardous substance is used in the construction phase therefore there is no chance of soil or land contamination **Operation Phase** None	- Debris, Waste generated from construction material will be properly covered and stored and disposed-off periodically during the construction phase. No leftover construction waste will be left on the site. Maintenance of machinery will only be carried out at designated places to avoid any fuel spill if require. - Reinstate and protect cleared areas as soon as possible. - Cover unused area of disturbed or exposed surfaces immediately with mulch/grass turnings/tree plantations. - Locate stockpiles away from drainage lines. - Remove debris from drainage paths	Weekly during Construction Phase	**Construction phase** Contractor **Operational phase** PHED

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
			and sediment control structures. - Keep the final or finished surface of all the raised lands free from any kind of depression that causes water logging. - Reinstate the natural landscape of the ancillary construction sites after completion of works.		
8.	**Waste Water**	**Construction Phase** Water used in the construction material during preparing bed and lean activity, construction of pump house, septic tanks, LSRs and other works **Operation Phase** Sanitary waste water from the office	- Conduct daily inspections at the site to ensure removal of construction debris. - Store construction material containing fine particles in an enclosure so that sediment laden water does not drain into nearby water drains. - Sanitary waste will be drained to the drainage system properly.	- Visual inspection on daily basis during Construction Phase - Wastewater quality analysis at the beginning and end of construction phase	**Construction phase** Contractor

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
9.	**Safety Hazards**	**Construction Phase** Project related vehicular traffic Driving Injuries related with civil works and electrical works Heat Waves Cold Waves Communicable Diseases **Operation Phase** Injuries during Operational phase	- Ensure the World Bank EHS guideline will be followed. - Personal Protective Equipment will be provided during construction to the workers. - First Aid kits will be provided at sites. - Strict code of conduct will be followed. - Make safety precautions and display on the notice board of entry gate in both national and local language. - During heat wave, working hours will be revised to make sure that labor work force work only in early hours or late evening hours. - Monitoring weather forecasts for outdoor work to provide advance warning of extreme weather and scheduling work accordingly. - Adjustment of work and rest periods according to temperature stress management procedures	Daily during Construction and operation phase	**Construction phase** Contractor **Operational phase** PHED

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
			such as providing easy access to adequate hydration such as drinking water or electrolyte drinks depending on the temperature and workloads. - Providing temporary shelters to protect against the elements during working activities or for use as rest areas. - Implementation of health and hygiene practices to mitigate the communicable diseases.		
10.	**Socio-Economic Environment**	**Construction Phase** Traffic and vehicle movement Noise generated form subproject activities Labor requirement form the nearby area Occupational health & safety issue of working labor	- Plan temporary traffic arrangements during construction within the construction area. Review the plan periodically with respect to site conditions. - Give special consideration to local traffic management. - Take adequate precautions to prevent danger from electrical equipment (switches and wiring). - Provide a readily available first aid unit including an adequate supply	**Construction Phase** GRM for labor and community	**Construction phase** Contractor **Operational phase** PHED

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
		Operation Phase Employment opportunities Awareness to local people to emergency situation Gender Issues, Gender inclusion GBS and VAC related impacts	of sterilized dressing material and appliances. - GRM shall be develop and ensure the accessibility to the local community and labor.		

5 PICTORIAL PROFILE OF PROJECT SITES

5.1 Bodeywal Rural water supply scheme Taluka Kot Ghulam, District Mirpurkhas

5.2 Deh 151 Rural Water Supply Scheme, Taluka Digri, District Mirpurkhas

5.3 Dr. Iqbal Narejo Rural Water Supply Scheme, Taluka Hussain Bux Mari, District Mirpurkhas

5.4 Fazal Bhambhro Rural Water Supply Scheme, Taluka Jhudo, District Mirpurkhas

5.5 Jhudo Kachi Disposal Urban Drainage Scheme, Taluka Jhudo, District Mirpurkhas

5.6 Kot Ghulam Muhammad Urban Drainage Scheme, Taluka Kot Ghulam M, District Mirpurkhas

6 ENVIRONMENTAL AND SOCIAL IMPLEMENTATION BUDGET

There are total 43 schemes in District Mirpurkhas in which 2 are Drainage Schemes and 41 are water supply schemes. Environmental Quality Analysis for Air Quality Monitoring, Testing of Water and Wastewater Quality and Noise Level monitoring will be conducted at each sub-project site during the start and at completion of the sub-projects. The detail of cost has been given in table below. It is worthy to mention here that sub-projects are in Government owned land and there will be no social issue during the rehabilitation work.

Table 8: Environmental Compliance Cost

Item No.	Item	Rational	Frequency	Average Rate (Rs.)/unit*	Site-wise Quantity	No of units/sites	Total Quantity	Estimated Amount (Rs.)
A. Environmental Analysis at Start of Civil Works								
1	Wastewater	1 Sample from Each Drainage Scheme	Once at the Start of Construction	17,000	1	2	2	34,000
2	Drinking Water	One Sample from each water supply scheme		15,000	1	41	41	615,000
3	Ambient Air	1 Sample from each subproject scheme		15,000	1	43	43	645,000
4	Ambient Noise	1 Sample from each subproject scheme		1,000	1	43	43	43,000
							Sub Total - A	**1,303,000**
B. Environmental Analysis Cost at Completion Phase (18 months)								
1	Drinking Water	One from camp area at each water supply scheme site	Once at the End of Construction	15,000	1	41	41	615,000
	Wastewater	1 Sample from Each Drainage Scheme		17,000	1	2	2	34,000
2	Generators/Stack Emission (If available)	One Sample from construction site		10,000	1	43	43	430,000
3	Ambient Air	One from the camp area		15,000	1	43	43	645,000
4	Ambient Noise	One from the camp area		1,000	1	43	43	43,000
5	Mobilization Charges	At each water supply and drainage scheme		10,000	1	43	43	430,000
							Sub Total - B	**2,197,000**
C. EHS Management								
1	Personal Protective Equipment		Bi annual	6,000	1	43	43	258,000

Item No.	Item	Rational	Frequency	Average Rate (Rs.)/unit*	Site-wise Quantity	No of units/sites	Total Quantity	Estimated Amount (Rs.)
2	Waste Disposal from Construction Sites						Lump sum	100,000
3	Project dissemination materials such as banners, flayers, notice board etc.			10000	1	43	43	430,000
							Sub Total - C	**788,000**
D. EHS Administrative Cost								
1	Training/Capacity Building (Environment, Social, Gender, & OHS)		50 persons	20,000	1	43	43	860,000
2	Social Expert (for social compliance & GRM implementation) Salary			120,000	18	1	18	2,160,000
3	GRM running & General Community support needs (if any)						Lump sum	500,000
4	Environmental & OHS Officer Salaries (120 thousand for each person)			120,000	18	1	18	2,160,000
							Sub Total - D	**5,680,000**
							TOTAL OF (A TO D)	**9,968,000**

*** Schemes wise testing will be performed at start of civil works**

7 OPERATION AND MAINTENANCE (O&M)

Operation and maintenance (O&M) of Water Supply (WS) and Drainage Systems is a critical task that ensures the continued provision of safe and reliable water and drainage services to communities. O&M activities can be divided into two main categories: preventive maintenance and corrective maintenance.

Preventive maintenance is carried out on a regular basis to prevent problems from occurring. This includes activities such as cleaning and inspecting pipes, valves, and other equipment; lubricating the moving machines etc. Corrective maintenance is carried out to address problems that have already occurred. This includes activities such as repairing broken pipes, replacing damaged equipment, and clearing blockages in drainage systems. In addition, the PHED should also ensure timely procurement of disinfectant chemicals for disinfection of the water and keep a sufficient stock of such chemicals so that there is no interruption in making the water safe for human consumption.

O&M of WS and Drainage Systems is a complex and challenging task. It requires a skilled workforce, a well-maintained inventory of spare parts, and a comprehensive set of procedures and documentation. However, the benefits of effective O&M are significant. By preventing problems from occurring and addressing problems quickly, O&M can help to ensure the continued provision of safe and reliable water services to communities. After completion of rehabilitation work, the project will be handed over to the PHED who will operate and maintain the project. PHED department has technical staff for operation and maintenance of proposed rehabilitation schemes. Moreover, GoS yearly allocates substantial budget for operation and maintenance of these schemes. After rehabilitation these schemes will be operationalized under PHED through its O&M section which is adequately staffed with required skills and expertise. Training of these staff would be required to operate new machinery installed during rehabilitation.

7.1 Key aspects of O&M for WSS and Drainage systems:

7.1.1 Operation:

i. Regular monitoring of water sources, such as reservoirs, wells, or treatment plants, to ensure a consistent water supply.

ii. Operation of pumps, valves, and control systems to regulate the flow of water through the distribution network.

iii. Monitoring and maintaining water pressure levels within acceptable limits.

iv. Disinfecting the water all the times prior to supplying to the consumers.

v. Managing water quality, including regular testing and treatment to ensure compliance with health and safety standards.

vi. Coordinating with the local community and consumers to address their water supply needs and concerns.

7.1.2 Maintenance

i. Routine inspection of pipelines, valves, and fittings to identify and repair leaks, cracks, or any other damages.

ii. Clearing blockages in pipelines, channels, and drains to maintain an unobstructed flow of water.

iii. Cleaning and desilting of reservoirs, tanks, and drainage channels to prevent sedimentation and maintain capacity. After every cleanup operation, the tanks, reservoirs and / or pipelines must be disinfected prior to putting them back to use.

iv. Repair and maintenance of water treatment plants, pumping stations, and other infrastructure components.

v. Regular calibration and maintenance of measuring instruments and control systems.

vi. Periodic maintenance of equipment such as pumps, motors, and generators.

7.1.3 Emergency Response

i. Developing contingency plans and emergency response protocols to address unexpected events such as equipment failures, natural disasters, or water contamination incidents.

ii. Establishing a communication system to notify the public and relevant authorities in case of emergencies.

iii. Rapid response and repair of damages during emergencies to restore the system's functionality as quickly as possible.

7.1.4 Water Conservation

i. Implementing water conservation measures, such as promoting public awareness campaigns, encouraging responsible water usage, and identifying and repairing water wastage points.

ii. Monitoring and managing water losses and leakages in the distribution network.

iii. Regular assessment and optimization of the system to reduce energy consumption and improve overall efficiency.

7.1.5 Data Management

i. Maintaining comprehensive records of system performance, maintenance activities, and water quality data.

ii. Utilizing data analysis and predictive modeling to optimize the operation and maintenance activities.

iii. Incorporating modern technologies, such as remote sensing, real-time monitoring systems, and data analytics, to improve decision-making and efficiency.

7.1.6 Documentation and Handover

i. Compile project documentation (operation and maintenance manuals, as-built drawings, warranties).

ii. Hand over documentation to the PHED for future reference.

7.1.7 Facilities Management

i. Establish a comprehensive facilities management plan.

ii. Outline responsibilities, protocols, and schedules for maintenance, inspections, repairs, and upgrades.

7.1.8 Staffing and Training

i. Increase adequate staffing.

ii. Provide necessary training for personnel deputed for O&M.

iii. Increase maintenance technicians, engineers, custodial staff, security personnel, and administrative support.

7.1.9 Preventive Maintenance

i. Implement a preventive maintenance program.

ii. Conduct regular inspections, cleaning, lubrication, adjustments, and equipment testing.

7.1.10 Repairs and Corrective Maintenance

i. Respond promptly to issues and conduct repairs.

ii. Establish an inventory of spare parts.

iii. Maintain relationships with reliable contractors or suppliers.

7.1.11 Safety and Compliance

i. Enforce safety protocols.

ii. Conduct regular inspections and provide safety training.

iii. Ensure compliance with relevant codes and regulations.

7.1.12 Energy Efficiency and Sustainability

i. Promote energy efficiency and sustainable practices.

ii. Implement energy management systems.

iii. Optimize equipment performance.

iv. Utilize renewable energy sources and green building practices.

7.1.13 Asset Management

i. Track and monitor equipment and systems.

ii. Maintain an asset inventory.

iii. Conduct periodic assessments and plan for replacements or upgrades.

7.1.14 Stakeholder Communication

i. Establish clear communication channels.

ii. Receive and address maintenance requests.

iii. Maintain effective communication with stakeholders.

7.1.15 Continuous Improvement

i. Regularly evaluate and seek feedback.

ii. Analyze maintenance records.

iii. Conduct user surveys.

iv. Involve the maintenance team in identifying areas for improvement.

7.1.16 Cleaning and maintenance of solar system

i. Regularly clean solar panels to remove dust, debris, and dirt.

ii. Inspect for any damage or wear and tear on the panels.

iii. Check the wiring and connections for any loose or damaged parts.

iv. Monitor the performance of the solar system to ensure it is generating the expected amount of energy.

v. Conduct preventive maintenance such as tightening bolts and screws, and replacing faulty components.

vi. Schedule professional inspections and maintenance by qualified solar technicians.

vii. Keep records of cleaning and maintenance activities for future reference.

viii. Follow manufacturer's guidelines and recommendations for cleaning and maintenance.

ix. Consider scheduling cleaning during periods of low sunlight or in cooler temperatures for safety reasons.

x. Ensure the safety of personnel when performing maintenance tasks on the solar system.

7.1.17 Regular maintenance and monitoring of Hypo-chlorinator

i. Routine inspections: Conduct regular inspections of the hypo-chlorinator system to identify any visible signs of damage, leaks, or malfunctions. Inspect all components, including injection systems, pipes, valves, and storage tanks.

ii. Calibration of equipment: Calibrate the hypo-chlorinator equipment periodically to ensure accurate dosing or injection of chlorine. Follow the manufacturer's guidelines for calibration procedures and frequency.

iii. Replacement of parts: Replace worn-out or damaged parts of the hypo-chlorinator system as needed. This may include valves, seals, gaskets, tubing, or other components. Use genuine manufacturer-approved parts for replacements.

iv. Monitoring chlorine levels: Regularly monitor chlorine levels in the water supply to ensure that the desired disinfection levels are being maintained. This can be done through manual sampling and testing or by using automated monitoring systems. Adjust the hypo-chlorinator settings if necessary to achieve the desired chlorine concentration.

v. System optimization: Continuously assess the performance of the hypo-chlorinator system and optimize its operation for efficiency and effectiveness. This may involve adjusting dosing rates, ensuring proper mixing of chlorine, optimizing contact time, and considering factors such as water temperature and flow rate.

vi. Documentation: Maintain detailed records of maintenance activities, inspections, calibrations, and chlorine monitoring results. This documentation serves as a reference for future maintenance, helps track system performance, and aids in regulatory compliance.

vii. Training and awareness: Regularly train and update the personnel responsible for operating and maintaining the hypo-chlorinator system. Ensure they are aware of proper maintenance procedures, safety protocols, emergency response measures, and any updates or changes in regulations.

7.1.18 PHED Responsibility

i. PHED solely responsible for operation and maintenance.

ii. Customize O&M plans for long-term success.

Overall, O&M of WSS and Drainage System requires a combination of technical expertise, regular monitoring, preventive maintenance, and prompt response to ensure the uninterrupted supply of clean water and effective wastewater management. The Public Health Engineering Division (PHED) would typically be responsible for the operation and maintenance of public infrastructure projects related to Water Supply and Drainage System. They would be the primary entity overseeing the operation and maintenance activities to ensure the functionality and sustainability of the constructed assets. By considering these aspects and implementing effective O&M practices, the project can function optimally and provide long-term benefits to its users and stakeholders.

7.2 Key benefits of effective O&M of WSS and Drainage Systems

i. **Improved water quality:** O&M activities can help to prevent the contamination of water supplies, which can lead to waterborne diseases.

ii. **Increased water availability**: O&M activities can help to reduce leakages and improve the efficiency of water distribution systems, which can lead to increased water availability for communities.

iii. **Reduced flooding:** O&M activities can help to prevent flooding by clearing blockages in drainage systems and improving the capacity of storm water management systems.

iv. **Improved public health:** O&M activities can help to prevent the spread of waterborne diseases by improving the quality of water supplies and reducing the risk of flooding.

v. **Increased property values:** Communities with well-maintained WSS and drainage systems typically have higher property values.

The cost of O&M can be significant, but the benefits far outweigh the costs. By investing in effective O&M, communities can ensure the continued provision of safe and reliable water services to their residents.

ANNEXURE 1:

Environmental & Social Screening Checklist of All Schemes of District Mirpurkhas

Annexure 1: Environmental & Social Screening Checklist of All Schemes of District Mirpurkhas

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Mirpurkhas Urban Water Supply Scheme (Taluka Mirpurkhas)	**Coordinates:** 25°30'39.63"N 69° 0'48.15"E
Date:	23/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	The site is devoid of vegetation. No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?	✓		The risk of contaminating drinking water sources would be short-term only during the construction phase of rehabilitation works of existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No such category is present in the subproject area.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities or in a close periphery.
Has **stakeholder engagement** taken place in the proposed subproject areas?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Were **vulnerable** groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Community requested to conduct a comprehensive needs assessment to understand the water supply demands and challenges in the area.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Mir Sher Muhammad Water Supply Scheme (Taluka Mirpurkhas)	**Coordinates:** 25°30'45.28"N 69°1'34.11"E
Date:	23/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Minor impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Minor impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.

Screening Question	*Yes*	*No*	*Remarks*
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community asked about the operations and how they will be benefited by the subproject.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women of the subproject area were taken onboard also.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Mirpurkhas City East Jamrao Water Supply Scheme (Taluka Mirpurkhas)	**Coordinates:** 25°33'24.00"N 69°5'23.52"E
Date:	23/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. Only a canal is flowing at distance of 143 m eastward from proposed project site.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Will community Health and Safety be impacted due to construction?
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, females were happy that sufficient supply of water will be available to the subproject area.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Mirpurkhas City West Jamrao Water Supply Scheme (Taluka Mirpurkhas)	**Coordinates:** 25°35'11.06"N 68°54'4.43"E
Date:	23/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Minor impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery /vehicles?	✓		Minor impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?		✓	Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A canal is flowing on western side at a distance of 157 m from proposed subproject site.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community requested to conduct a comprehensive needs assessment for the supply of drinking water as the population has increased but water supply and drainage networks are not available.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women of the subproject area were taken onboard also.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Ghulam Muhammad Laghari Water Supply Scheme (Taluka Shujabad)	**Coordinates:** 25°19'21.83"N 69°2'34.77"E
Date:	24/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community members asked about the operations of the drainage Scheme and the benefits from it.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, there is no attention to the literacy rate and education system of children.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Khuda Bux Khatyan Water Supply Scheme (Taluka Shujabad)	**Coordinates:** 25°25'23.52"N 69°4'1.31"E
Date:	24/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion.
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities or in a close periphery.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community requested to resolve the specific health and hygiene challenges in the community due to stagnant water.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to the unavailability of a drainage network especially during monsoon and after it.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Muhammad Ali Halepota Water Supply Scheme (Taluka Shujabad)	**Coordinates:** 25°27'59.81"N 69° 5'27.34"E
Date:	24/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community pointed out that drainage networks are not available and if available are in bad condition or blocked.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women of the subproject area were taken onboard also. Mostly concerns were related to damaged or unavailable drainage lines.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes		
Sector:	Public Health Engineering Department (PHED)		
Subproject Location:	Mirpurkhas, Sindh		
Schemes Location:	Muhammad Khan Lashari Water Supply Scheme (Taluka Shujabad)	**Coordinates:**	25°25'23.49"N 69°7'52.12"E
Date:	24/8/2023		

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A River Puraan is flowing 1.4 km far from proposed project site in the southern direction.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community pointed out that drainage networks are not available and if available are in bad condition or blocked.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women of the subproject area were taken onboard also.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Umer Bughio Water Supply Scheme (Taluka Shujabad)	**Coordinates:** 25°26'42.30"N 68°57'8.83"E
Date:	24/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A canal is flowing 100 m far from proposed project site in the southern direction.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community pointed out that drainage networks are not available and if available are in bad condition or blocked.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women shared that stagnant water or wastewater causes skin irritations and other diseases.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Khan Water Supply Scheme (Taluka Hussain Bux Marri)	**Coordinates:** 25°37'0.91"N 68°57'18.07"E
Date:	25/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion.
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A canal is flowing 911 m far from proposed project site in the eastern direction.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction. Proper mitigations must be implemented

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			so that social receptors would not get disturbed.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities or in a close periphery.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community requested to provide water supply lines and drainage network where it is not available.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to the unavailability of a drainage network especially during monsoon and after it.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Patayoon Water Supply Scheme (Taluka Hussain Bux Marri)	**Coordinates:** 25°44'10.87"N 68°57'9.80"E
Date:	25/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/ vehicles?	✓		Negligible impacts will be posed only during the the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community members expressed concern about the overall impact of the water supply and drainage system on public health and sanitation.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, their main concern was how they will be benefited by the schemes.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Old Mirpur Water Supply Scheme (Taluka Hussain Bux Marri)	**Coordinates:** 25°34'25.49"N 69° 3'59.18"E
Date:	25/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/ vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion.
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction. Proper mitigations must be implemented so that social receptors would not get disturbed.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities in a close periphery.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community also raised concerns about the construction activities associated with water supply and drainage schemes can cause disruptions to daily life, including noise, dust, traffic congestion, and temporary service interruptions.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes. They were concerned about health and hygiene issues due to unavailability or improper supply of water as well as stagnant wastewater.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Old Mirpur Intake Water Supply Scheme (Taluka Hussain Bux Marri)	**Coordinates:** 25°34'15.44"N 69° 4'4.09"E
Date:	25/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion.
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.

Screening Question	*Yes*	*No*	*Remarks*
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction. Proper mitigations must be implemented so that social receptors would not get disturbed.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities in a close periphery.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community was happy as the associated subproject works will improve access to clean water, proper sanitation facilities, and effective drainage systems in the area.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes. They were concerned about health and hygiene issues due to unavailability or improper supply of water.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Vesro Water Supply Scheme (Taluka Hussain Bux Marri)	**Coordinates:** 25°32'24.21"N 69° 5'27.13"E
Date:	25/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion.
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction. Proper mitigations must be implemented so that social receptors would not get disturbed.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities or in a close periphery.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community requested to conduct a comprehensive needs assessment to understand the specific education gaps and challenges in the community.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes. Females were concerned about their mobility for daily purposes during construction.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Aziz Brohi Water Supply Scheme (Taluka Hussain Bux Marri)	**Coordinates:** 25°32'43.79"N 68°53'48.67"E
Date:	25/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/ vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A canal is flowing on westward at a distance of 412 m.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community members showed concerns about the overall impact of the water supply and drainage schemes on public health and sanitation.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women shared that stagnant water or wastewater causes skin irritations and other diseases.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Dr. Iqbal Narejo Water Supply Scheme (Taluka Hussain Bux Masrri)	**Coordinates:** 25°40'28.21"N 69° 0'50.33"E
Date:	25/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community pointed out that drainage networks are not available and if available are in bad condition or blocked.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women shared that stagnant water or wastewater causes skin irritations and other diseases. There is also unavailability of educational facilities like higher school and colleges for girls.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Hingorno Water Supply Scheme (Taluka Sindhri)	**Coordinates:** 25°43'58.27"N 69°10'29.89"E
Date:	26/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The community urged to provide semi-skilled and unskilled jobs for local labor first.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members showed their reservations about their privacy during construction.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Girhore Shrief Water Supply Scheme (Taluka Sindhri)	**Coordinates:** 25°34'57.98"N 69°21'11.90"E
Date:	26/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Yes, residents investigated how disruptions to daily life, including noise, dust, traffic congestion, and temporary service interruptions will be mitigated.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, engaging local people during project activities and considering the women's privacy not be affected.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Din Muhammad Junejo (Taluka Sindhri)	**Coordinates:** 25°43'16.89"N 69° 7'2.33"E
Date:	26/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		The Stakeholder shows their concern regarding the impacts during the construction stage on waste management and land acquisition.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, there is no attention to the literacy rate and education system of children.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Kot Ghulam Muhammad City Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°17'20.90"N 69°15'21.13"E
Date:	26/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A canal is flowing adjacent to proposed subproject site at a distance of 96 m.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community members showed concerns about the overall impact of the water supply and drainage schemes on public health and sanitation.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women shared that stagnant water or wastewater causes skin irritations and other diseases.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Rajputh Goth Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°16'51.46"N 69°21'5.33"E
Date:	26/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings. A canal is flowing at a distance of 950 m away from proposed subproject area.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Yes, community was concerned about how the maintenance and sustainability of drainage schemes will be ensured.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to unavailability of drainage network.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Waghreji Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°17'14.75"N 69° 7'39.29"E
Date:	28/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.

Screening Question	*Yes*	*No*	*Remarks*
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Yes, Will the drainage scheme require long-term maintenance? How sustainability will be ensured?
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to unavailability of drainage network.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Yaqoob Pur Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°12'59.02"N 69°14'11.57"E
Date:	28/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes the disposal of suspended solids in nearby water bodies
Will the proposed subproject interventions pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		negligible impacts only during construction
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts only during construction
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities which exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community members showed concerns about the overall impact of the water supply and drainage schemes on public health and sanitation.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, women shared that stagnant water or wastewater causes skin irritations and other diseases.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Deh-294 Water Supply Scheme Taluka Kot Ghulam M)	**Coordinates:** 25°14'28.78"N 69°14'48.13"E
Date:	28/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	The site is devoid of vegetation. No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there are no protected areas situated in nearby surroundings.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Will the drainage scheme require long-term maintenance? How sustainability will be ensured?
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to unavailability of drainage network.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Dayal Garh Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°10'47.25"N 69°12'43.43"E
Date:	28/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?	✓		Yes, a canal is flowing at a distance of 40-60 meters away from proposed water supply scheme.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction. Proper mitigations must be implemented so that social receptors would not get disturbed.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities or in a close periphery.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Community requested to resolve issues related to water supply lines and stagnant wastewater after rains
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes. Females were concerned about their mobility for daily purposes during construction.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Kachelo Farm Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°14'51.60"N 69°10'47.31"E
Date:	28/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	The site is devoid of vegetation. No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?	✓		Yes, a canal is flowing on southeastern side at a distance of 1.2 km.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Will the drainage scheme require long-term maintenance?
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage network.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Mehar Muhammad Boota Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°12'41.49"N 69°11'33.76"E
Date:	29/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	Yes, a canal and River Puraan are flowing on western side at a distance of 209 m and 1.4 km respectively.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Deh-333 Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°16'29.98"N 69°17'29.46"E
Date:	29/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	Yes, a canal and River Puraan are flowing on western side at a distance of 209 m and 1.4 km respectively.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Longewal Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°15'1.88"N 69°16'36.23"E
Date:	29/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	Yes, a canal is flowing at a distance of 128 m..
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP) ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT		
Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Bodewal Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°12'1.30"N 69°15'54.91"E
Date:	29/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No. there is no environmental sensitive area in the surrounding.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Nandi Duberji Water Supply Scheme (Taluka Kot Ghulam M)	**Coordinates:** 25°11'26.12"N 69°11'21.92"E
Date:	29/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	Yes, a River Puraan is flowing 1.2 km far away on western side.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Urban Water Supply Scheme Digri (Taluka Digri)	**Coordinates:** 25° 8'39.56"N 69° 6'35.39"E
Date:	30/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of subproject area.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Miryar Muhammad Water Supply Scheme (Taluka Digri)	**Coordinates:** 25° 5'27.45"N 69°14'2.56"E
Date:	30/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	Yes, a River Puraan is flowing 538 m west from proposed subproject area.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Kangoro Water Supply Scheme (Taluka Digri)	**Coordinates:** 25°14'11.57"N 69° 2'1.85"E
Date:	30/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Deh-194 Water Supply Scheme (Taluka Digri)	**Coordinates:** 25° 2'53.82"N 69°11'37.30"E
Date:	30/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Jio Kaloi Water Supply Scheme (Taluka Digri)	**Coordinates:** 25° 5'51.73"N 69°10'35.28"E
Date:	31/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.

Screening Question	*Yes*	*No*	*Remarks*
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the water supply and drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Deh-154 Water Supply Scheme (Taluka Digri)	**Coordinates:** 25°12'40.09"N 69° 1'16.12"E
Date:	31/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the water supply and drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Deh-155 Water Supply Scheme (Taluka Digri)	**Coordinates:** 25°13'5.57"N 69° 2'9.70"E
Date:	31/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the water supply and drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Deh-151 Water Supply Scheme (Taluka Digri)	**Coordinates:** 25°10'55.96"N 69° 0'38.44"E
Date:	31/8/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the water supply and drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Urban Water Supply Scheme Naukot (Taluka Jhudo)	**Coordinates:** 24°50'52.83"N 69°24'32.40"E
Date:	1/9/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	Yes, a canal is flowing from west to east at a distance of 400-800 m.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude and said that it would uplift the socio-economic condition of the community as the water supply and drainage system was very old and ineffective.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared hygiene and health issues due to damaged drainage networks especially during and after monsoon season.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Fazal Bhambhro Water Supply Scheme (Taluka Jhudo)	**Coordinates:** 24°53'58.52"N 69°27'15.99"E
Date:	1/9/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of the proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders showed a positive attitude as availability of clean water is the basic necessity and insist to engage locals for construction works.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared due to unavailability and nonfunctional supply lines they face problems and fetch water from pumping stations or nearby tube wells. Moreover, damaged and clogged drainage lines cause serious health and hygiene issues in the area.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Kot Ghulam Muhammad Drainage Scheme (Taluka Kot Ghulam Muhammad)	**Coordinates:** 25°17'20.90"N 69°15'21.13"E
Date:	26/8/2023	

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.

Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of the proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.

Screening Question	*Yes*	*No*	*Remarks*
Are there expected to be any **traffic-related issues** as a result of the proposed subproject intervention activities, particularly during the construction phase?	✓		Minor impacts only during construction.
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders asked to ensure the maintenance of proposed works so that they can get benefit on long run.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, some female members shared due to unavailability and nonfunctional supply lines they face problems and fetch water from pumping stations or nearby tube wells. Moreover, damaged and clogged drainage lines cause serious health and hygiene issues in the area.

SINDH FLOOD EMERGENCY REHABILITATION SUBPROJECT (SFERP)
ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST OF SUB-SUBPROJECT

Name of Subproject:	Rehabilitation of Damaged Water Supply & Drainage Schemes	
Sector:	Public Health Engineering Department (PHED)	
Subproject Location:	Mirpurkhas, Sindh	
Schemes Location:	Urban Drainage Scheme Jhudo (Kachi Disposal (Taluka Jhudo)	**Coordinates:** 24°58'2.53"N 69°18'12.48"E
Date:	1/9/2023	

Screening Question	*Yes*	*No*	*Remarks*
PHYSICAL ENVIRONMENT			
Will the proposed subproject activities pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		✓	No such activity will take place that causes this risk.
Will the proposed subproject activities pose a risk of **contaminating drinking water sources** due to construction activities?		✓	The risk of contaminating drinking water sources would be short-term as the primary objective of water supply and drainage scheme rehabilitation work is to rehabilitate the existing system and its associated facilities.
Is there any potential **pollution source** in water supply network?		✓	No, as such no pollution sources have been identified but due to flood existing infrastructure has been affected causes pollution in drinking water supply.
Is there any potential source that can **damage drainage network**? Or Is it **affected by flood**?	✓		Yes, flood and improper maintenance are the potential sources of destruction of drainage network
Will the proposed subproject interventions **deplete groundwater** because of the water used during rehabilitation activities?		✓	Water from tankers and bowsers will be utilized during construction.
Will the proposed subproject interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will the proposed subproject interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	✓		Negligible impacts will be posed only during the construction phase that will be mitigated.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		✓	No, proper implementation of mitigations and maintenance of equipment, and machinery will be done to keep levels within limits.
Will the proposed subproject activities lead to increased **soil erosion?**		✓	Rehabilitation works do not involve any activity that will increase soil erosion

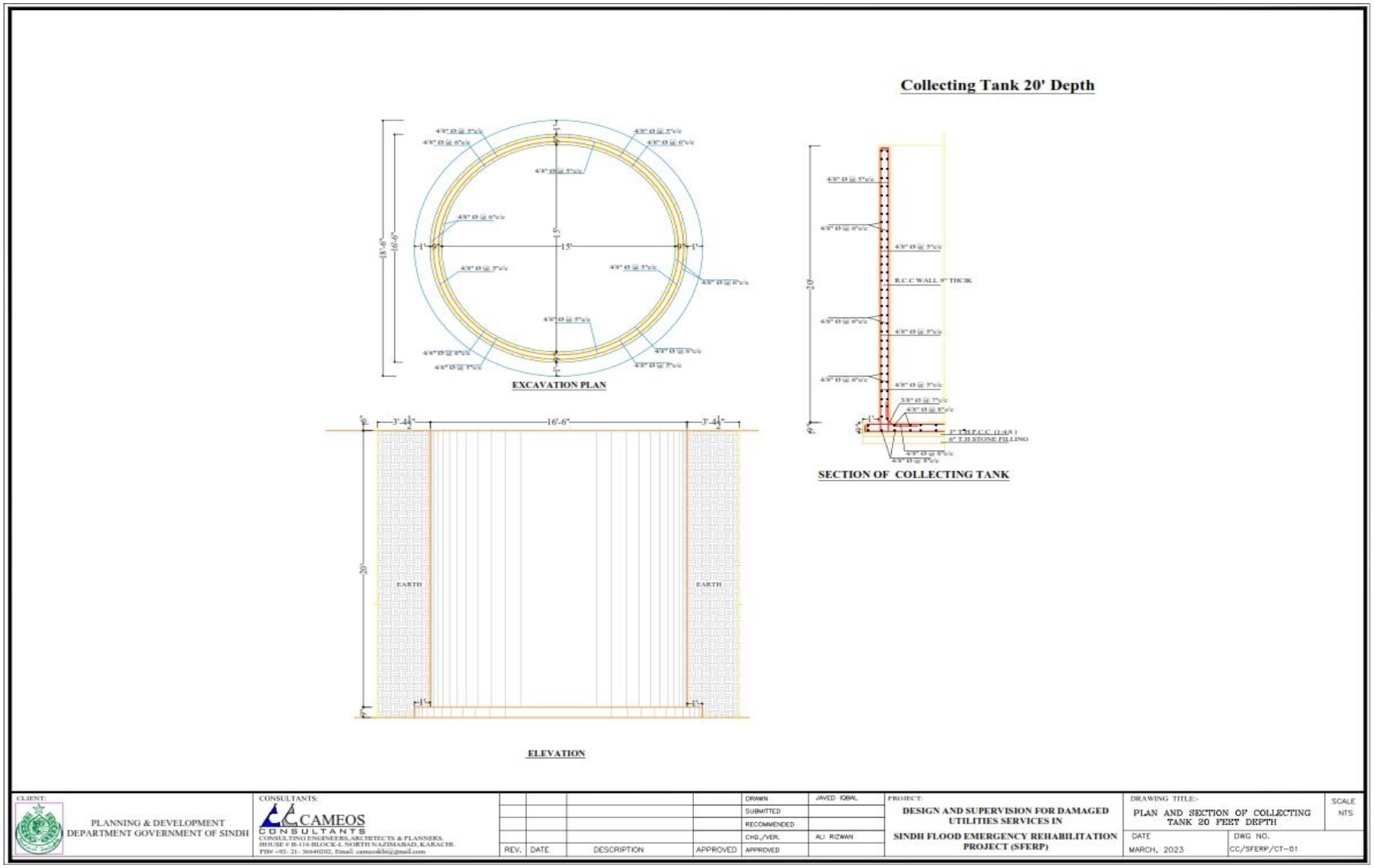
Screening Question	*Yes*	*No*	*Remarks*
Will the proposed subproject interventions result in the generation of **hazardous and/or non-hazardous waste**?	✓		Less quantity of debris and construction waste will be generated which will be handed over to the waste contractor for safe disposal.
Will the proposed subproject interventions result in potentially increased health risks for **subproject workers and communities** (e.g., communicable diseases)?		✓	Workers from nearby localities will be commuted daily for a specific duration so it would not increase health risks.
Are the proposed subproject interventions being implemented in an area with **high natural hazard risk**? (e.g., floods, earthquakes, droughts, etc.)		✓	The Subproject area does not come under the category of high hazard risk.
ECOLOGICAL ENVIRONMENT			
Will the proposed subproject interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		✓	No, as it will be limited to the specified areas of urban settlements.
Will any rehabilitation work be located in areas that would promote the **conversion of natural habitats**?		✓	Rehabilitation work does not include the conversion of natural habitat as it will only upgrade the existing damaged utilities.
Will any proposed subproject interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		✓	No, there is no environmental sensitive area in the surrounding of the proposed subproject.
Are the proposed subproject interventions activities likely to pose risks to any **endangered species?**		✓	Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.
SOCIAL ENVIRONMENT			
Will the proposed subproject activities involve **land acquisition**?		✓	Subproject land is owned by GoS.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?		✓	There would not be any forced or child labor risk as the contractor is bound to hire only those people who have valid CNIC or are at least 18 years old.
Is **labor influx** (**outside labor force**) expected during the construction of the proposed subproject?		✓	No, locals of the area would be given preference for skilled and non-skilled jobs.
Will **local labor** be used for the proposed subproject construction activities?	✓		Yes, locals of the area will be given preference first.
Will there be any **temporary or permanent displacement** as a result of the proposed subproject construction or operation activities?		✓	Rehabilitation works will be done for existing utilities that exist in a demarcated area.
Are there expected to be any **traffic-related issues** as a result of the proposed subproject	✓		Minor impacts only during construction.

Screening Question	*Yes*	*No*	*Remarks*
intervention activities, particularly during the construction phase?			
Are the proposed subproject activities likely to have **impacts on important religious/cultural heritage sites**?		✓	No, as the rehabilitation work involves the upgradation or restoration of existing facilities.
Have there been any past **security-related issues** at the proposed subproject sites?		✓	No, the subproject area is situated in an urban settlement and on government-owned land.
Has **stakeholder engagement** taken place in the proposed subproject areas?	✓		Stakeholders asked to ensure the maintenance of proposed works so that they can get benefit on long run.
Were **vulnerable groups** involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	✓		Yes, females complained about the sanitation situation of the area as there were damaged lines create foul order and stagnant water provides breeding ground to several insects. Due to stagnant water their mobility becomes problematic.

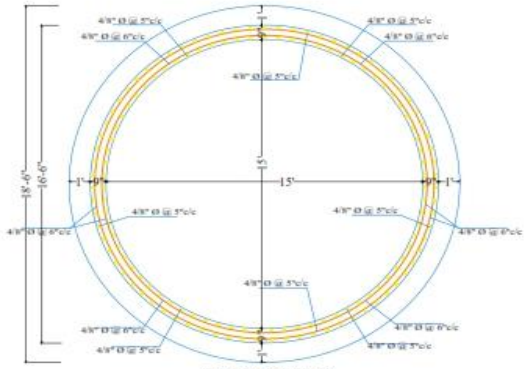
ANNEXURE 2:

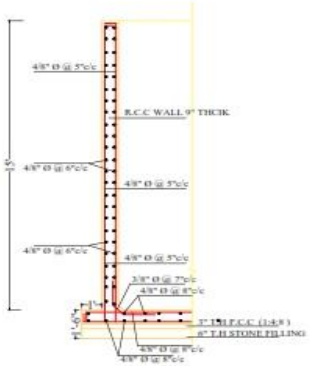
Design Drawings of Water Supply Schemes & Drainage

Annexure 2: Design Drawings of Water Supply Schemes & Drainage



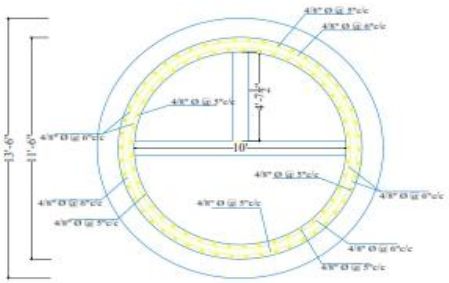
Collecting Tank 15' Depth



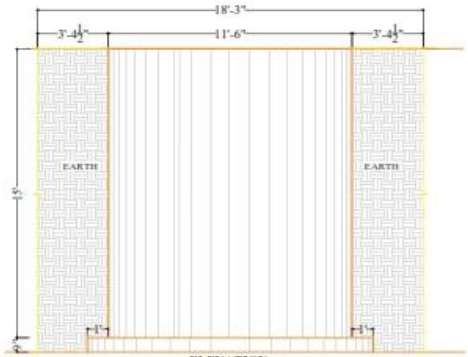


CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameokhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF COLLECTING TANK 15 FEET DEPTH	SCALE NTS
					SUBMITTED				
					RECOMMENDED				
					CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/CT-02
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

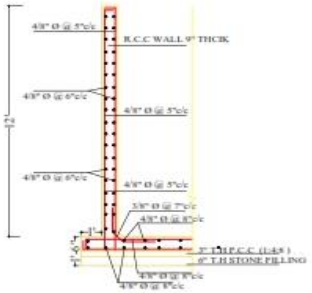
Collecting Tank 12' Depth



EXCAVATION PLAN

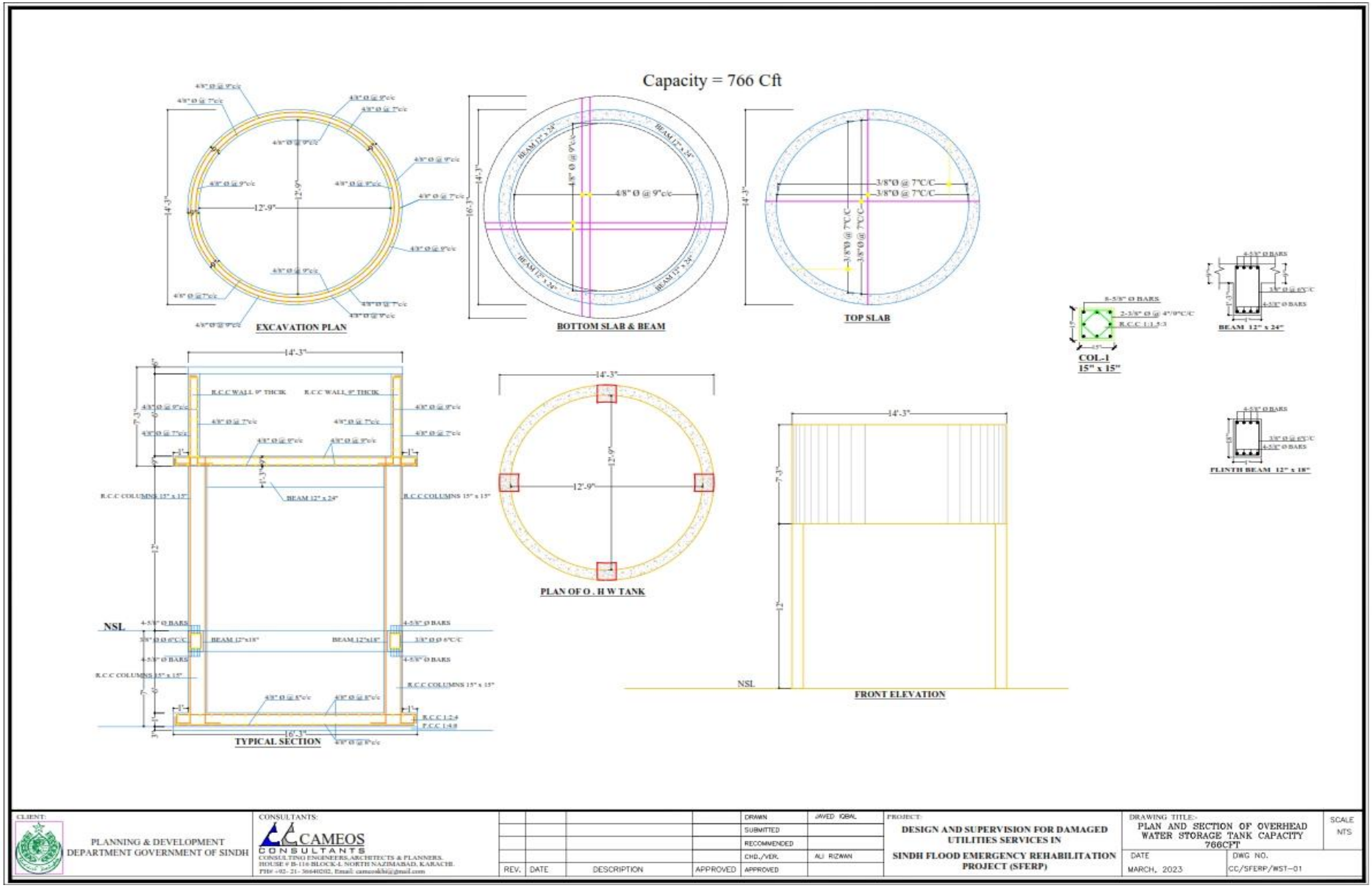


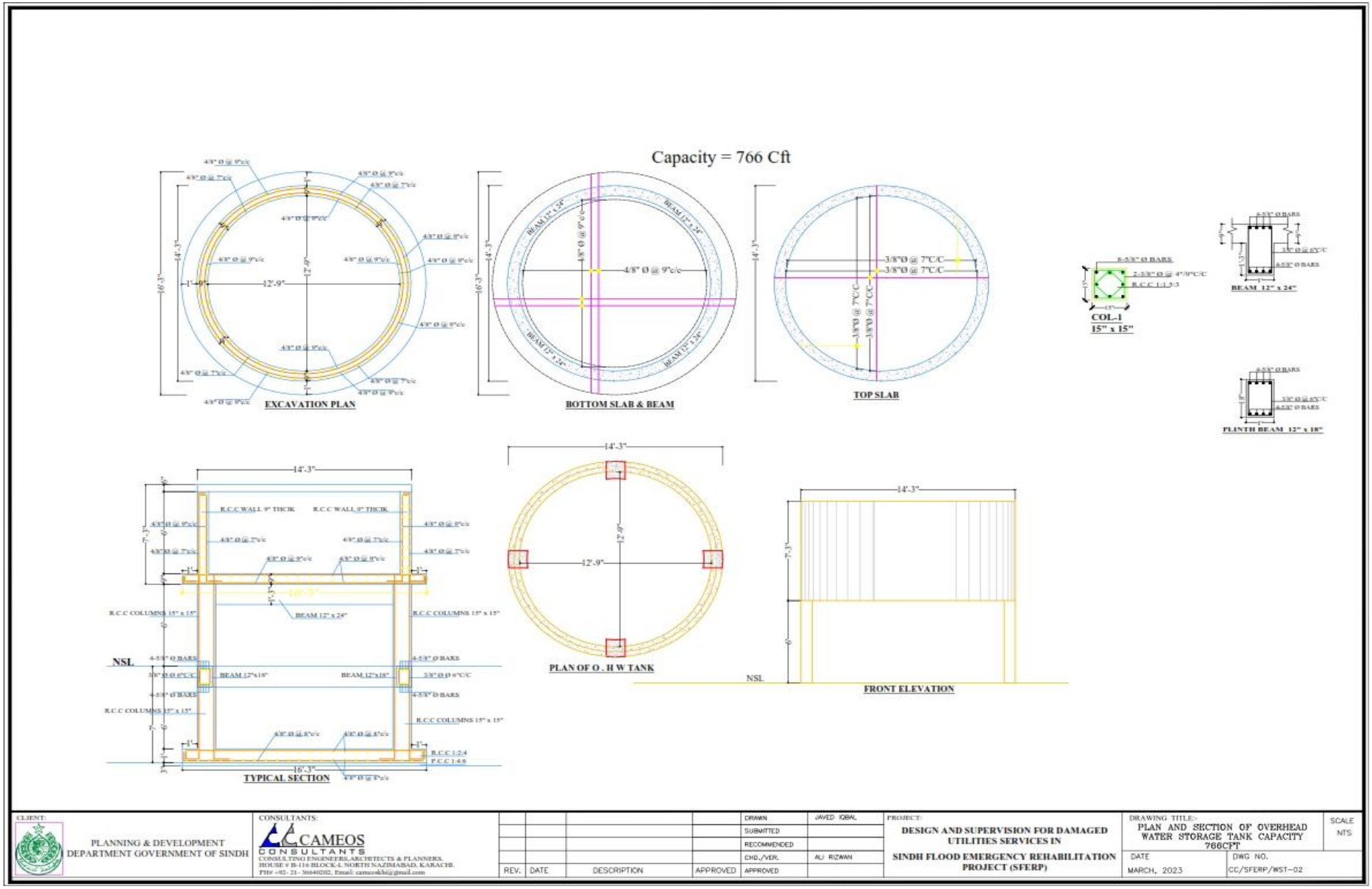
ELEVATION



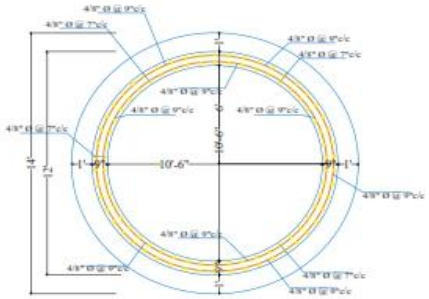
SECTION OF U.G.WATER TANK

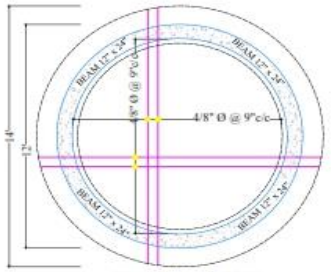
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameoskhi@gmail.com					DRAWN	JAWED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF COLLECTING TANK 12 FEET DEPTH	SCALE NTS
						SUBMITTED				
						RECOMMENDED				
						CHD./VER.	ALI RIZWAN			
	REV.	DATE	DESCRIPTION		APPROVED	APPROVED			DATE MARCH, 2023	DWG NO. CC/SFERP/CT-03

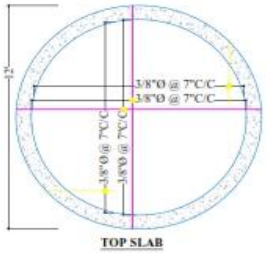

Capacity = 766 Cft
EXCAVATION PLAN
BOTTOM SLAB & BEAM
TOP SLAB
COL-I
15" x 15"
BEAM 12" x 24"
PLINTH BEAM 12" x 18"
PLAN OF O . H W TANK
FRONT ELEVATION
TYPICAL SECTION
NSL
R.C.C WALL 9" THICK
BEAM 12" x 24"
BEAM 12"x18"
R.C.C COLUMNS 15" x 15"
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS
CONSULTANTS
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 766CFT
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/WST-01
DRAWN JAVED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED APPROVED
REV. DATE DESCRIPTION

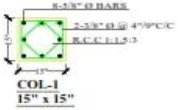

Capacity = 766 Cft
EXCAVATION PLAN
BOTTOM SLAB & BEAM
TOP SLAB
COL-1
15" x 15"
BEAM 12" x 24"
PLINTH BEAM 12" x 18"
TYPICAL SECTION
PLAN OF O . H W TANK
FRONT ELEVATION
NSL
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS
CAMEOS CONSULTANTS
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 766CFT
MARCH, 2023
CC/SFERP/WST-02

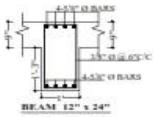
Capacity = 520 Cft

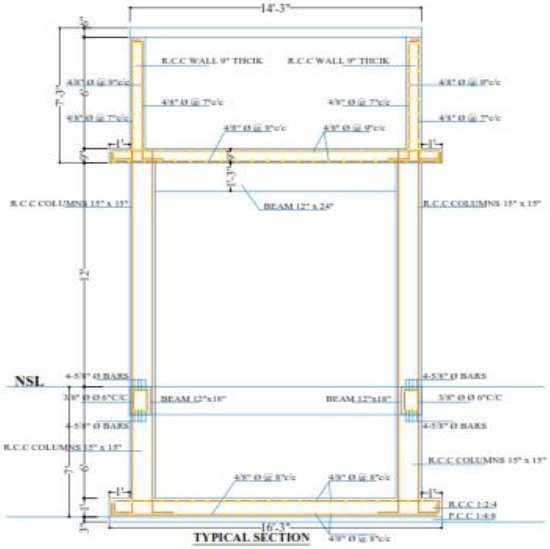


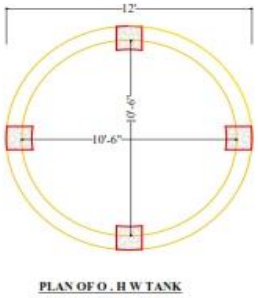


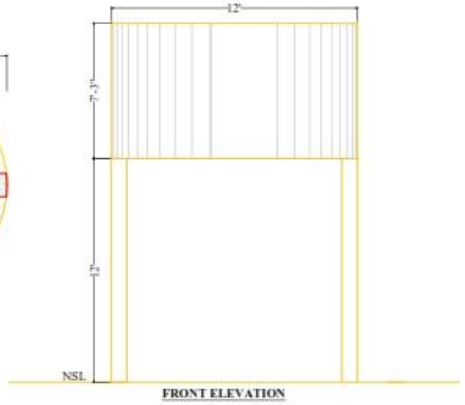


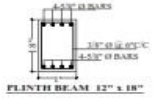






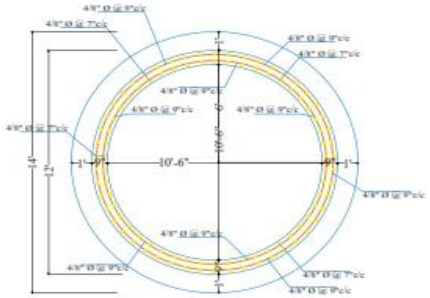


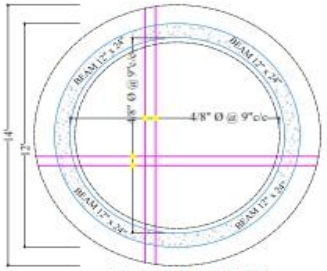


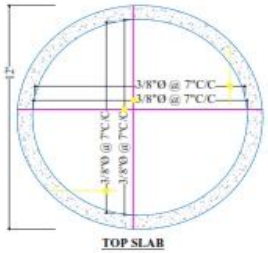


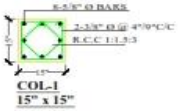
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PBX: +92- 21 - 36640202, Email: cameokhi@gmail.com					DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 520CFT	SCALE NTS
						SUBMITTED				
						RECOMMENDED				
						CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/WST-03
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

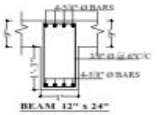
Capacity = 520 Cft

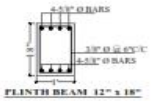


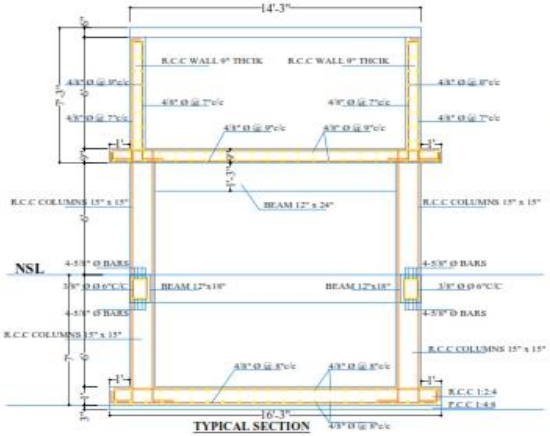


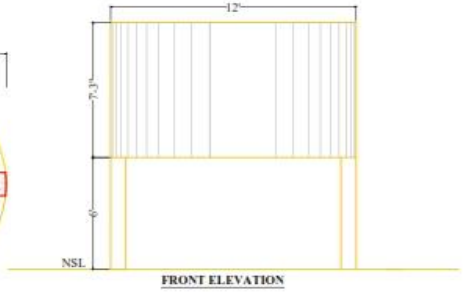




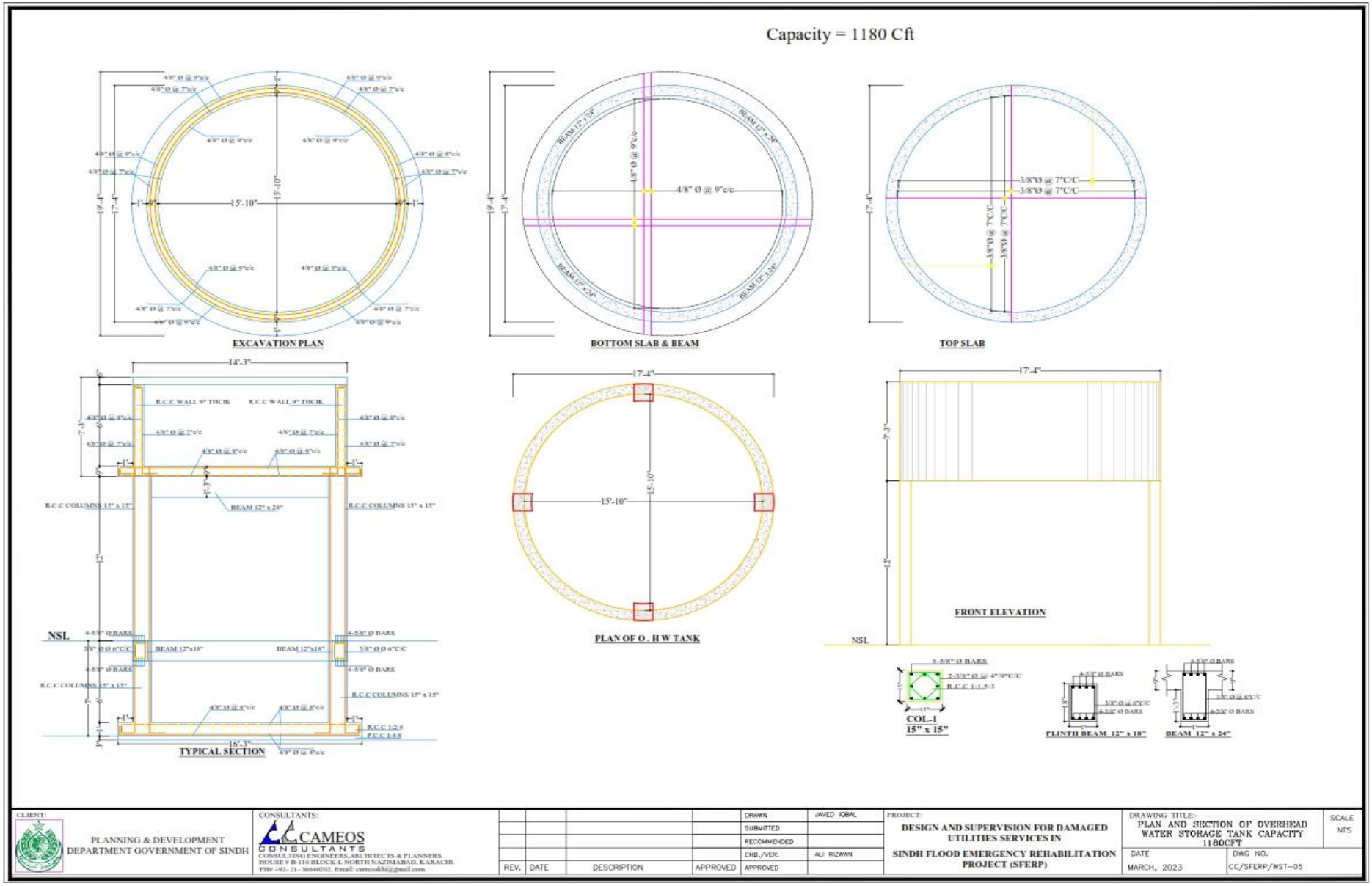




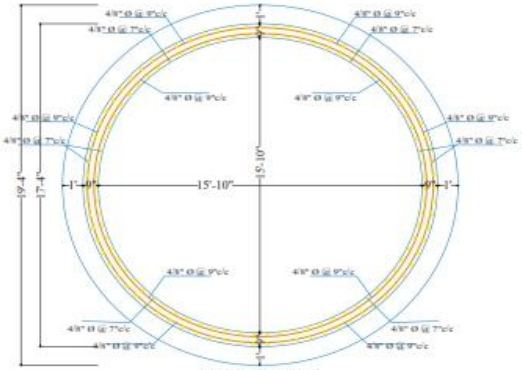




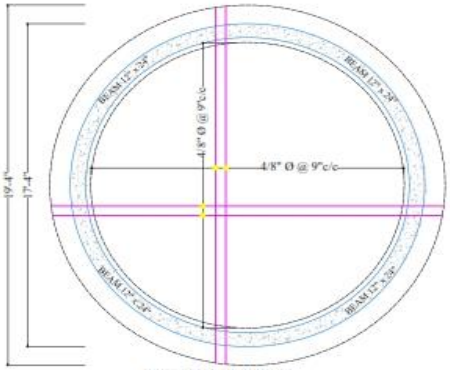
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92- 21 - 36640202, Email: cameoskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 520CFT	SCALE NTS
					SUBMITTED				
					RECOMMENDED				
					CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/WST-04
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				


Capacity = 1180 Cft
EXCAVATION PLAN
BOTTOM SLAB & BEAM
TOP SLAB
TYPICAL SECTION
PLAN OF O . H W TANK
FRONT ELEVATION
COL-I
15" x 15"
PLINTH BEAM 12" x 18"
BEAM 12" x 24"
CLIENT:
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS CONSULTANTS
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS.
HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI.
PROJECT:
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 1180CFT
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/WST-05
DRAWN JAWED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED
REV. DATE DESCRIPTION APPROVED

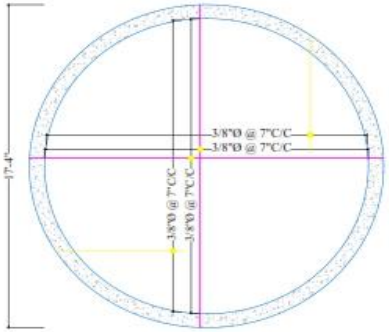
Capacity = 1180 Cft



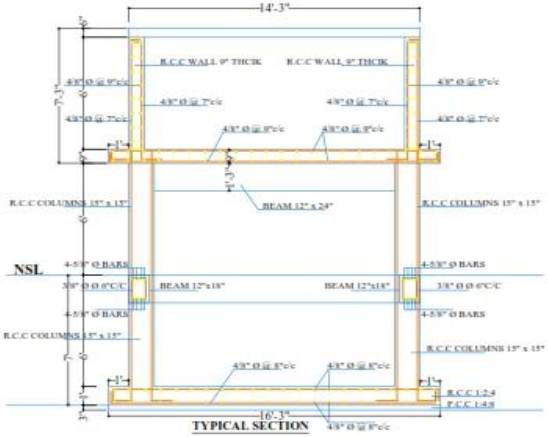
EXCAVATION PLAN



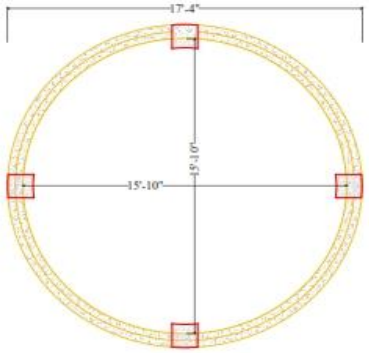
BOTTOM SLAB & BEAM



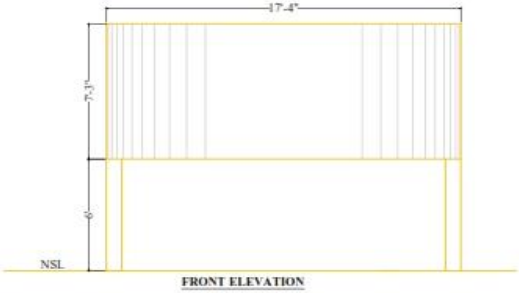
TOP SLAB



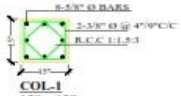
TYPICAL SECTION



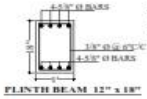
PLAN OF O . H W TANK



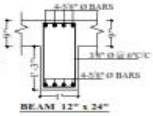
FRONT ELEVATION



COL-1
15" x 15"



PLINTH BEAM 12" x 18"



BEAM 12" x 24"

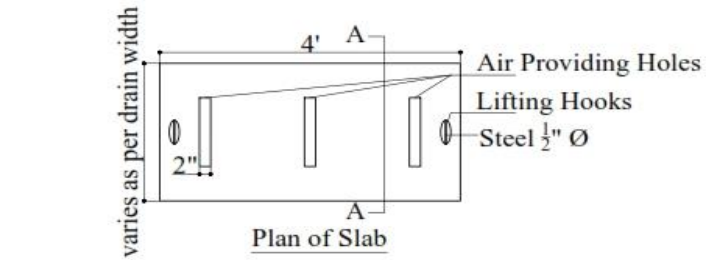
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS, CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameokhi@gmail.com			DRAWN: JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
				SUBMITTED	
				RECOMMENDED	
				CHD./VER.: ALI RIZWAN	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

DRAWING TITLE:- PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 1180CFT

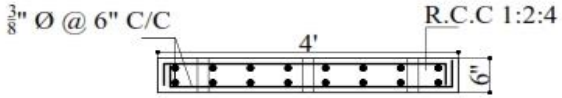
SCALE: NTS

DATE: MARCH, 2023

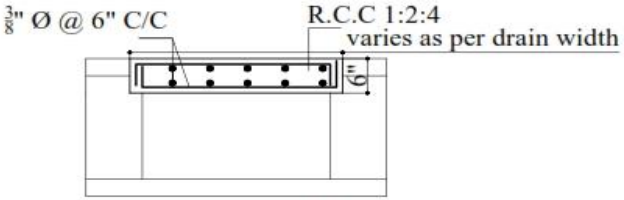
DWG NO.: CC/SFERP/WST-06



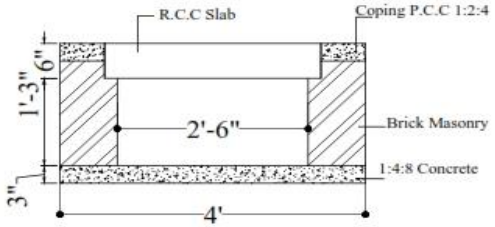
Plan of Slab



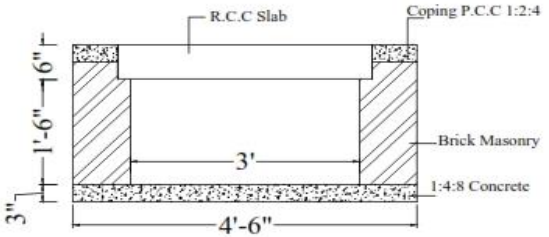
Section of Slab



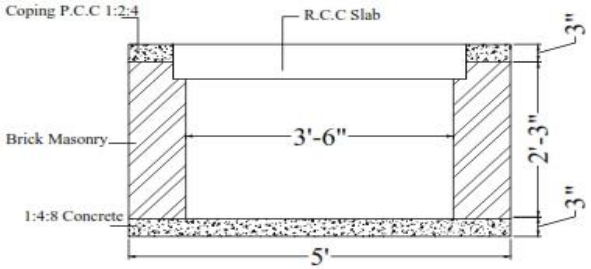
Section of Slab



Drain Type-I

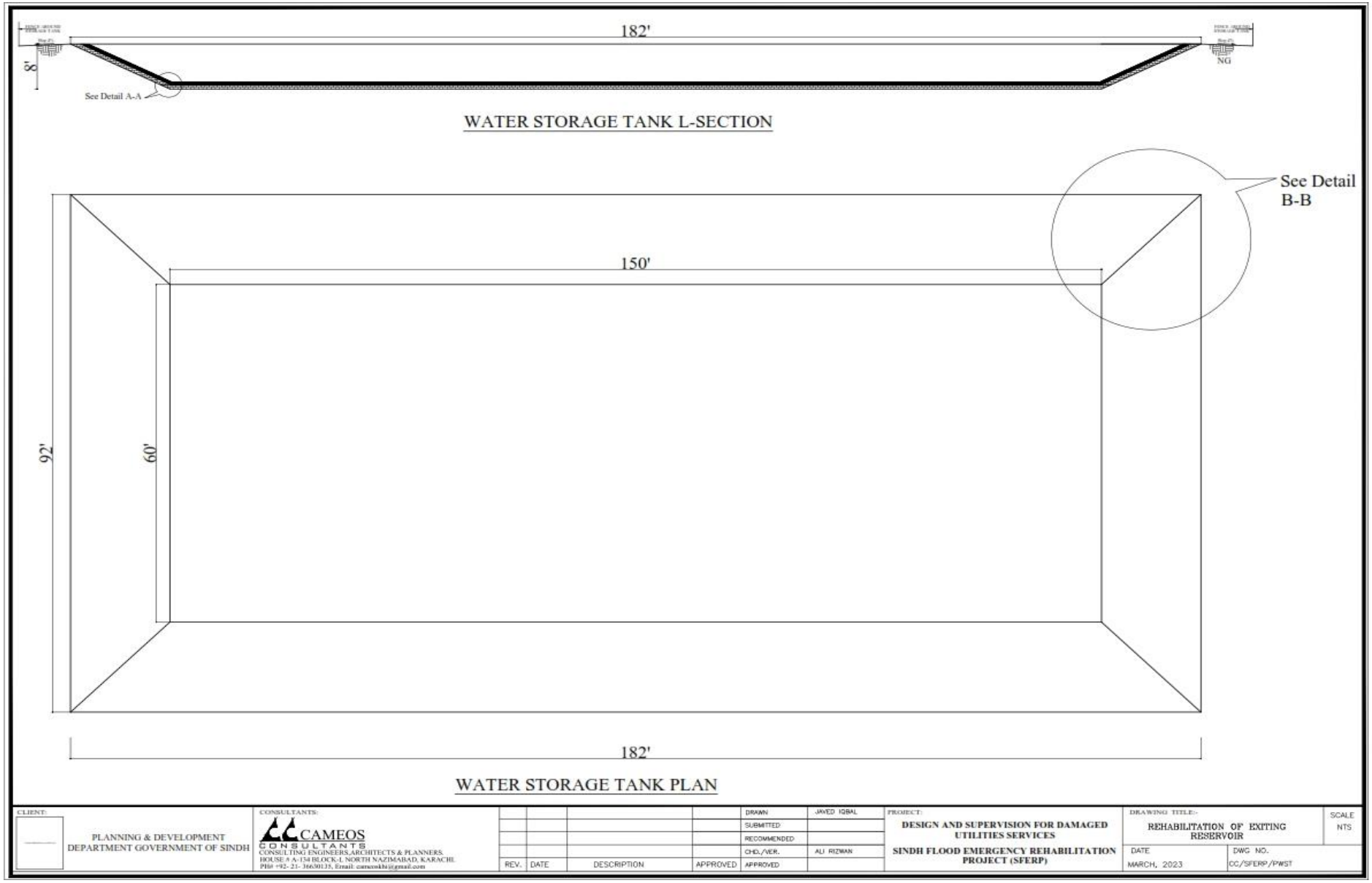


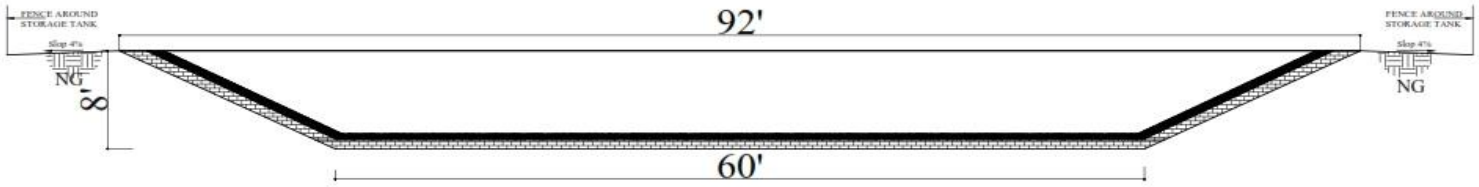
Drain Type-II



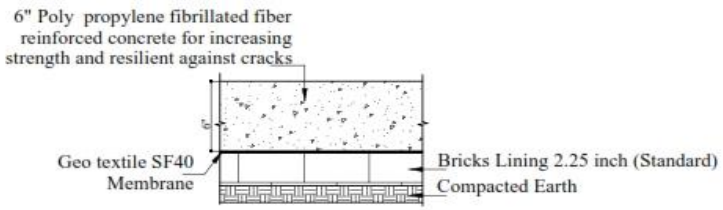
Drain Type-III

CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92- 21- 36640202, Email: cameroskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- DRAIN SECTIONS	SCALE NTS
					SUBMITTED				
					RECOMMENDED				
					CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/DS-01
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

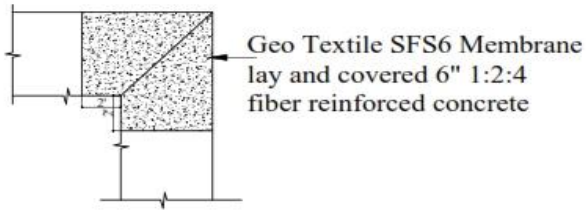

182'
8'
See Detail A-A
NG
WATER STORAGE TANK L-SECTION
See Detail B-B
150'
92'
60'
182'
WATER STORAGE TANK PLAN
CLIENT:
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS.
HOUSE # A-134 BLOCK-L NORTH NAZIMABAD, KARACHI.
PH# +92- 21- 36630135, Email: cameoskhi@gmail.com
REV. DATE DESCRIPTION APPROVED
DRAWN JAWED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED
PROJECT:
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
REHABILITATION OF EXITING RESERVOIR
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/PWST



WATER STORAGE TANK X-SECTION

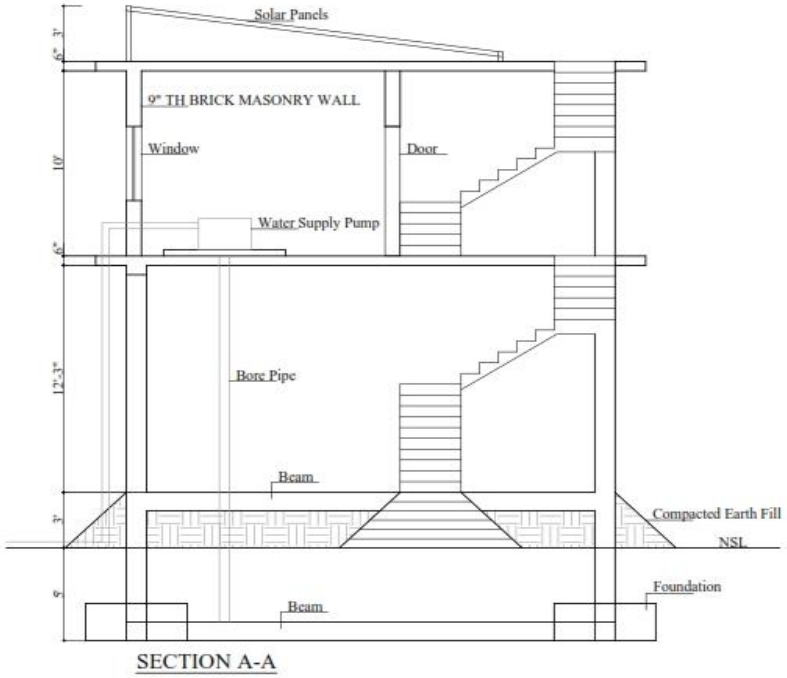


Detail A-A

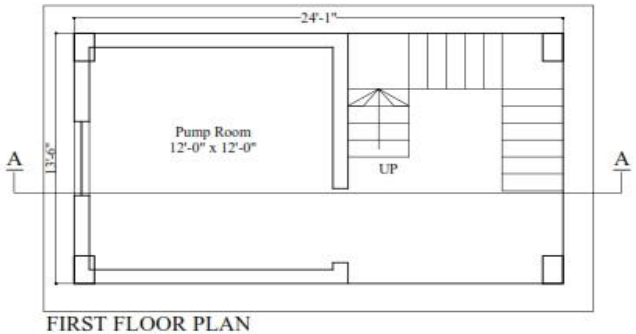


Detail B-B
Joint treatment with
Geo textile SFS6 membrane

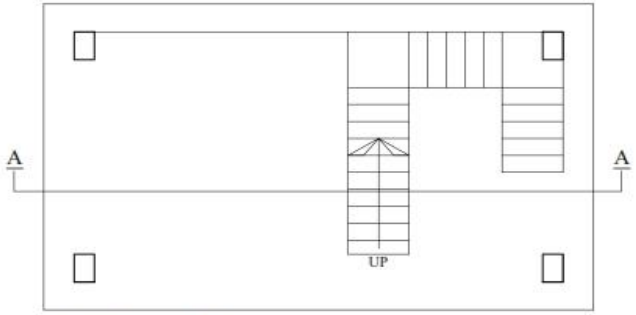
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # A-134 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92- 21- 36650135, Email: cameoskhi@gmail.com					DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- EXISTING RESERVOIR X-SECTION & EXPANSION JOINT DETAIL	SCALE NTS
						SUBMITTED				
						RECOMMENDED				
						CHD./VER.	ALI RIZWAN			
	REV.	DATE	DESCRIPTION		APPROVED	APPROVED			DATE MARCH, 2023	DWG NO. CC/SFERP/WST-01



SECTION A-A

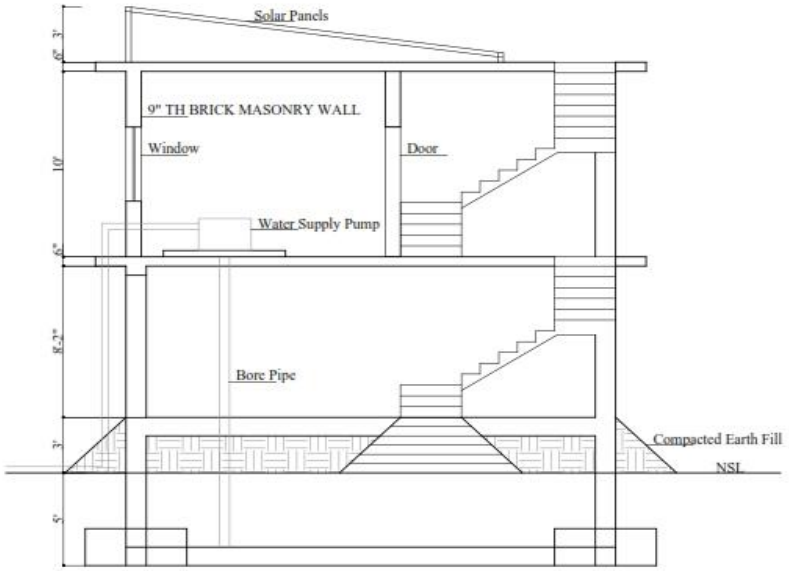


FIRST FLOOR PLAN

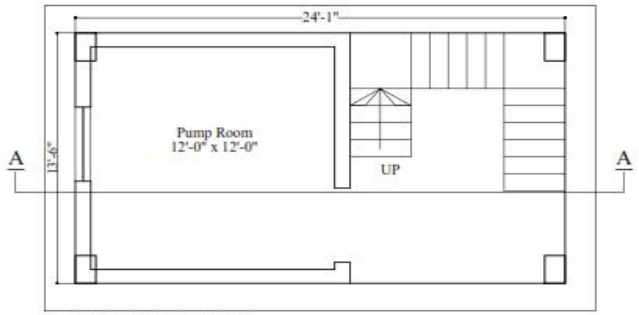


GROUND FLOOR PLAN

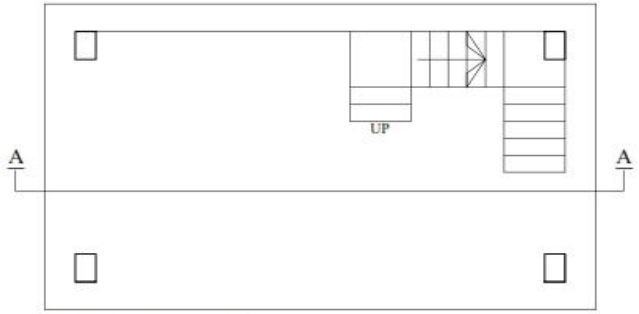
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PBX +92-21-36640202, Email: cameoskhi@gmail.com					DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF PUMP HOUSE	SCALE NTS
						SUBMITTED				
						RECOMMENDED				
						CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/PH-01
	REV.	DATE	DESCRIPTION		APPROVED	APPROVED				



SECTION A-A

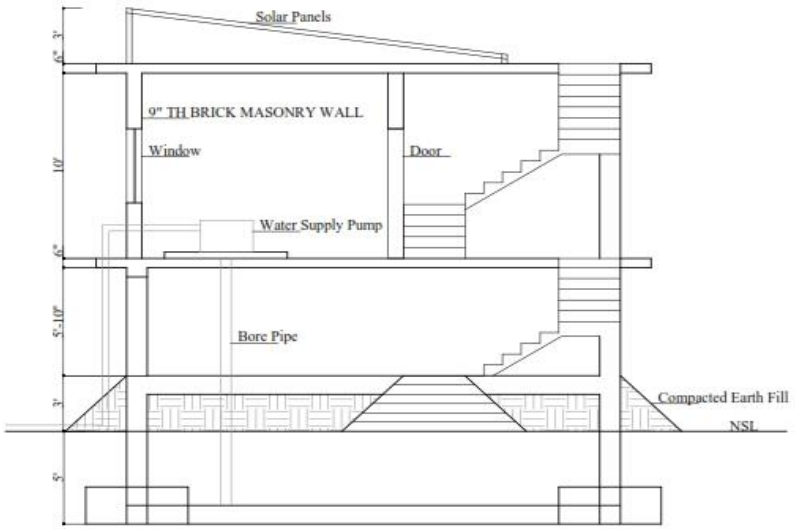


FIRST FLOOR PLAN

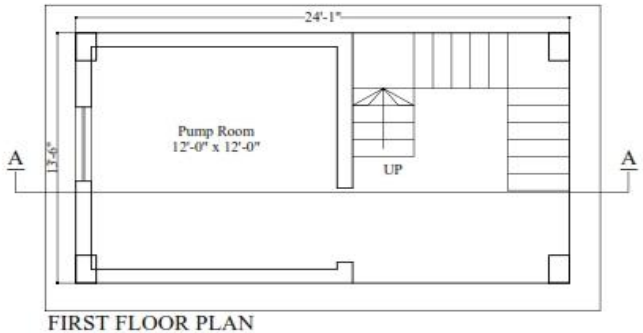


GROUND FLOOR PLAN

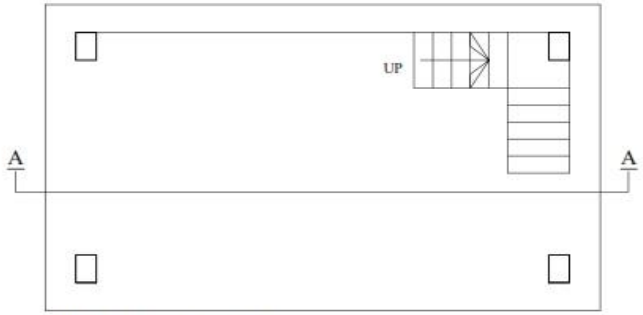
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameoskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF PUMP HOUSE	SCALE NTS
					SUBMITTED				
					RECOMMENDED				
					CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/PH-02
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



SECTION A-A

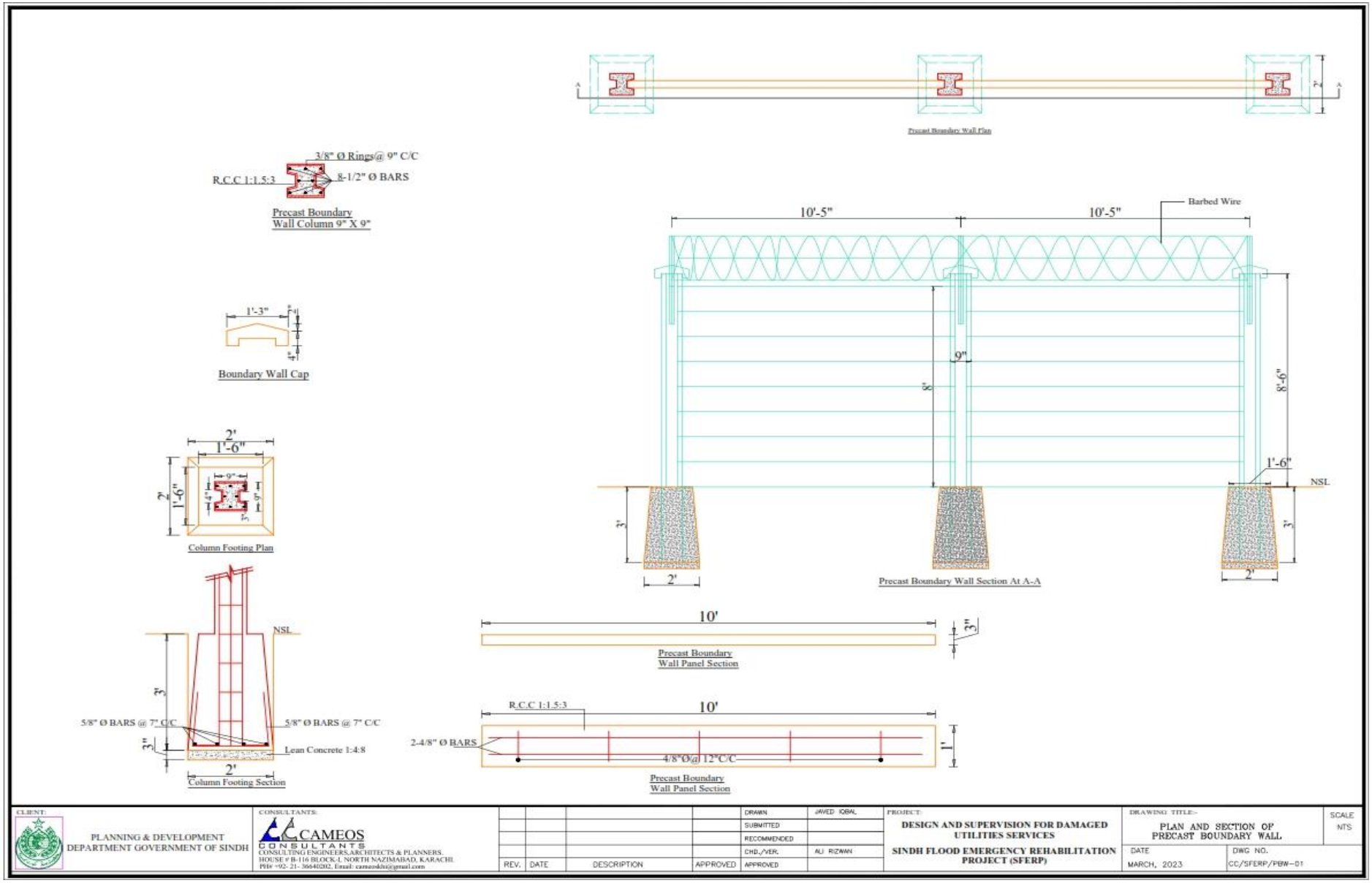


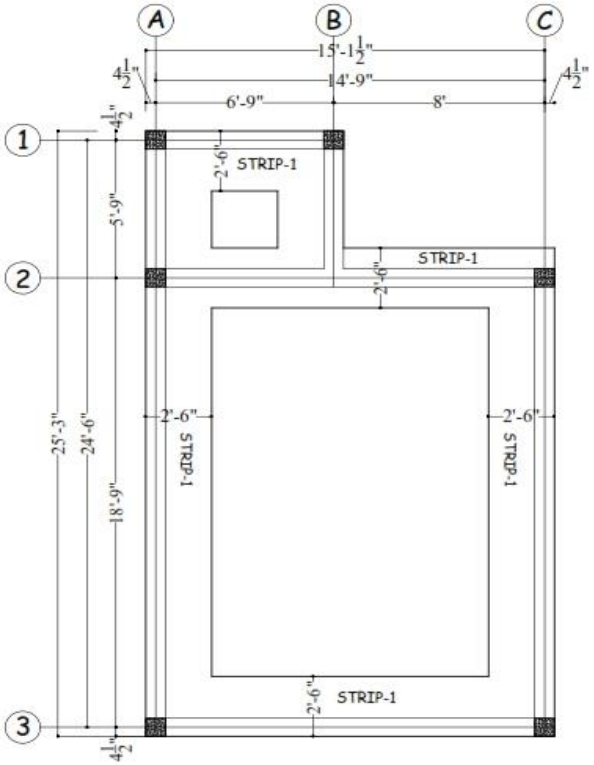
FIRST FLOOR PLAN



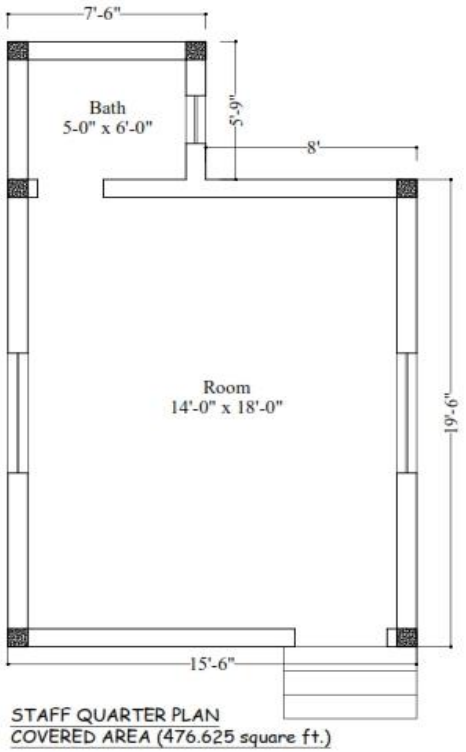
GROUND FLOOR PLAN

CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92- 21- 36640202, Email: cameoskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- PLAN AND SECTION OF PUMP HOUSE	SCALE NTS
					SUBMITTED				
					RECOMMENDED				
					CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/PH-03
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				


3/8" Ø Rings@ 9" C/C
R.C.C 1:1.5:3
8-1/2" Ø BARS
Precast Boundary Wall Column 9" X 9"
Precast Boundary Wall Plan
Barbed Wire
10'-5"
10'-5"
1'-3"
Boundary Wall Cap
9"
8'
8'-6"
1'-6"
NSL
3'
2'
Precast Boundary Wall Section At A-A
2'
1'-6"
Column Footing Plan
10'
Precast Boundary Wall Panel Section
NSL
3'
5/8" Ø BARS @ 7" C/C
5/8" Ø BARS @ 7" C/C
3"
Lean Concrete 1:4:8
2'
Column Footing Section
R.C.C 1:1.5:3
10'
2-4/8" Ø BARS
4/8"Ø@ 12"C/C
1'
Precast Boundary Wall Panel Section
CLIENT:
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS.
HOUSE # B-116 BLOCK-I, NORTH NAZIMABAD, KARACHI.
PH# +92- 21- 36640202, Email: cameoskhi@gmail.com
REV. DATE DESCRIPTION APPROVED
DRAWN JAVED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED
PROJECT:
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
PLAN AND SECTION OF PRECAST BOUNDARY WALL
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/PBW-01



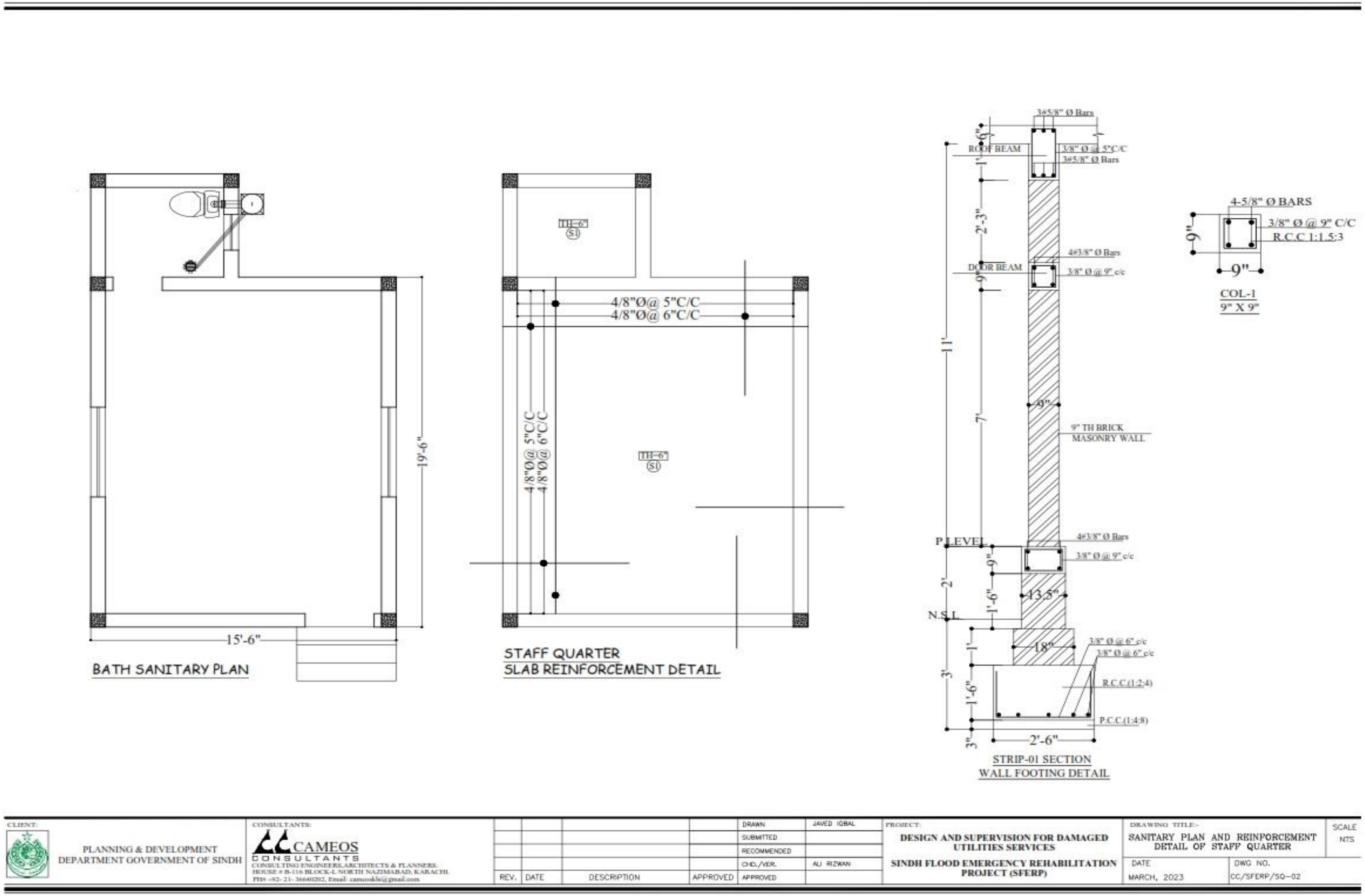
STAFF QUARTER LAYOUT PLAN

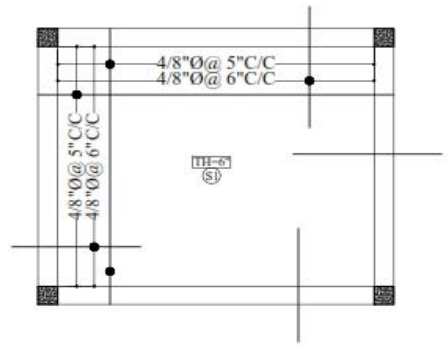


STAFF QUARTER PLAN
COVERED AREA (476.625 square ft.)

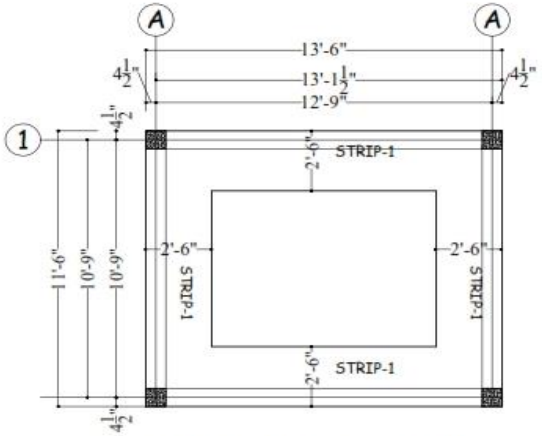
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameoskhi@gmail.com			DRAWN: JAWED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
				SUBMITTED	
				RECOMMENDED	
				CHD./VER.: ALI RIZWAN	
	REV.	DATE	DESCRIPTION	APPROVED: APPROVED	

DRAWING TITLE:- LAYOUT PLAN OF STAFF QUARTER | SCALE: NTS | DATE: MARCH, 2023 | DWG NO.: CC/SFERP/SQ-01

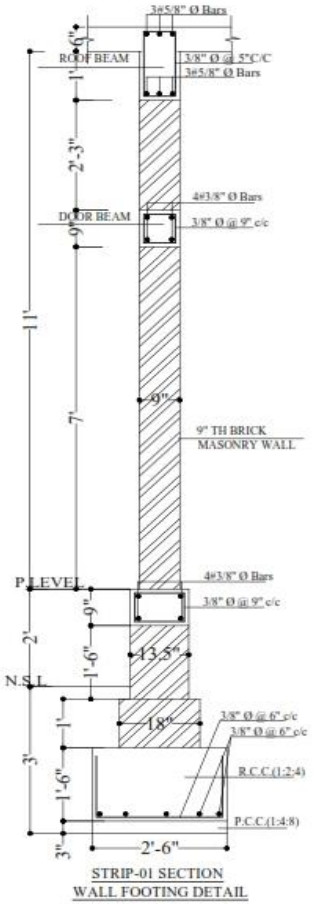

BATH SANITARY PLAN
15'-6"
19'-6"
STAFF QUARTER
SLAB REINFORCEMENT DETAIL
4/8"Ø@ 5"C/C
4/8"Ø@ 6"C/C
TH=6"
S1
3#5/8" Ø Bars
ROOF BEAM
3/8" Ø @ 5"C/C
3#5/8" Ø Bars
4#3/8" Ø Bars
DOOR BEAM
3/8" Ø @ 9" c/c
9" TH BRICK
MASONRY WALL
P.LEVEL
N.S.L.
13.5"
18"
3/8" Ø @ 6" c/c
R.C.C.(1:2:4)
P.C.C.(1:4:8)
2'-6"
11'
7'
2'-3"
1'-6"
3'
STRIP-01 SECTION
WALL FOOTING DETAIL
4-5/8" Ø BARS
3/8" Ø @ 9" C/C
R.C.C 1:1.5:3
9"
COL-1
9" X 9"
CLIENT:
PLANNING & DEVELOPMENT
DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS
CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS.
REV. DATE DESCRIPTION APPROVED
DRAWN JAVED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED
PROJECT:
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
SANITARY PLAN AND REINFORCEMENT DETAIL OF STAFF QUARTER
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/SQ-02



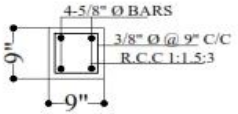
MACHINERY ROOM PLAN
COVERED AREA (239.250 square ft.)



MACHINERY ROOM LAYOUT PLAN
COVERED AREA (239.250 square ft.)



STRIP-01 SECTION
WALL FOOTING DETAIL



COL-1
9" X 9"

CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI PH# +92-21-36640202, Email: cameoskhi@gmail.com			DRAWN	JAVED IQBAL
				SUBMITTED	
				RECOMMENDED	
				CHD./VER.	ALI RIZWAN
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

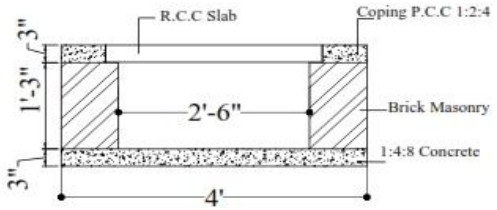
PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)

DRAWING TITLE:- PLAN AND REINFORCEMENT DETAIL OF MACHINERY ROOM

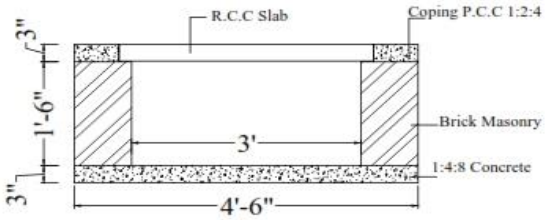
SCALE: NTS

DATE: MARCH, 2023

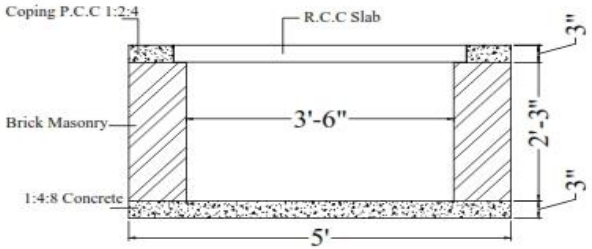
DWG NO.: CC/SFERP/MR-01



Drain Type-I

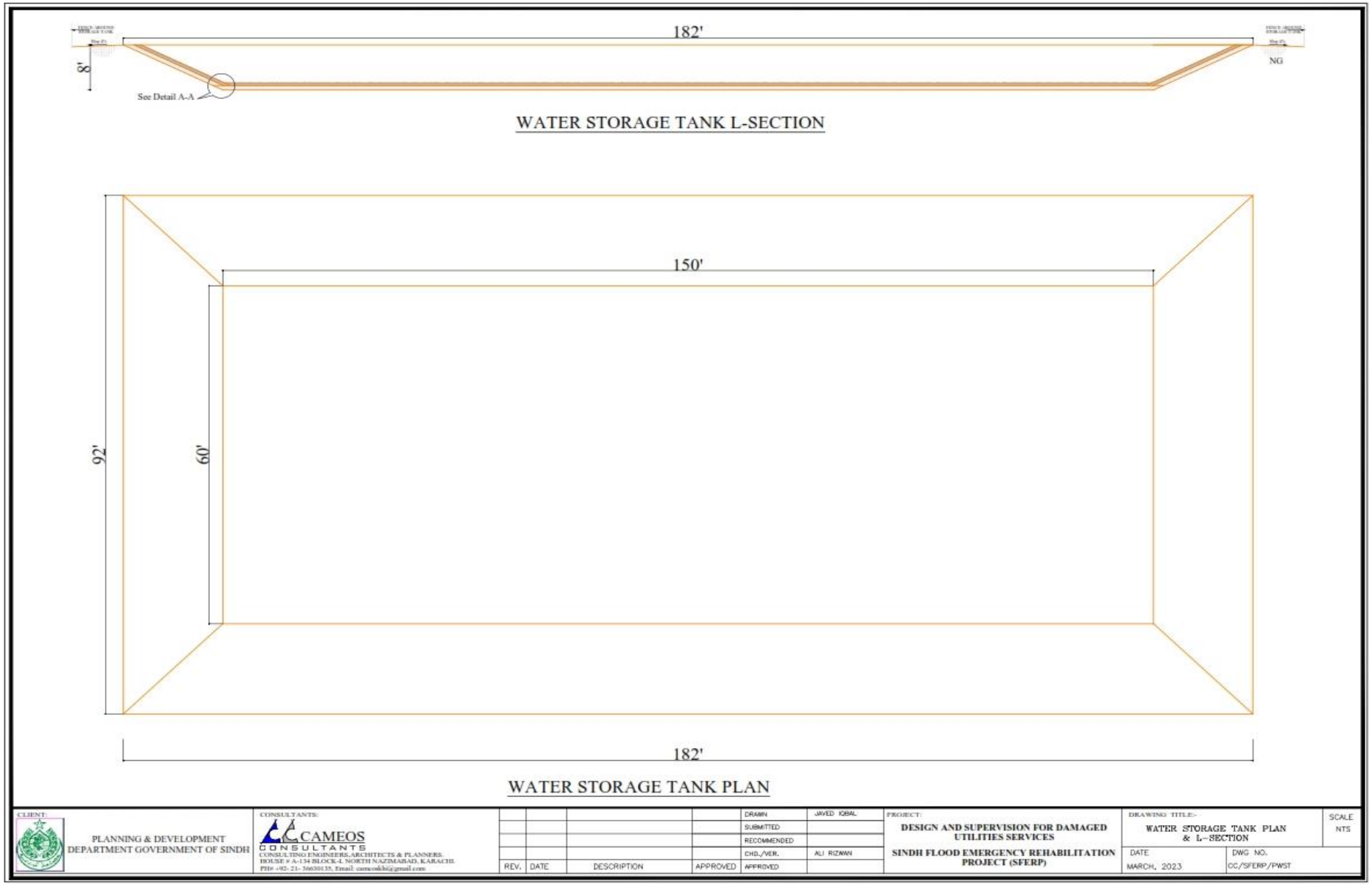


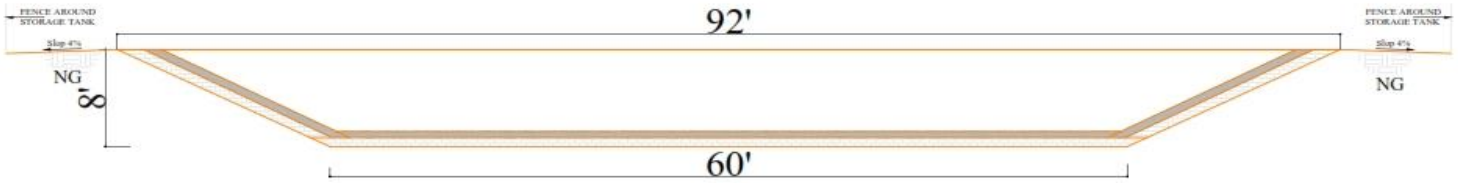
Drain Type-II



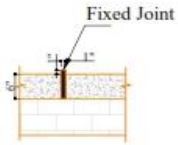
Drain Type-III

CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameoskhi@gmail.com					DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- DRAIN SECTIONS	SCALE NTS
						SUBMITTED				
						RECOMMENDED				
						CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/DS-01
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				


182'
8'
See Detail A-A
NG
WATER STORAGE TANK L-SECTION
150'
92'
60'
182'
WATER STORAGE TANK PLAN
CLIENT:
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS CONSULTANTS
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS.
HOUSE # A-134 BLOCK-L NORTH NAZIMABAD, KARACHI.
PH# +92-21-36650135, Email: camcokhi@gmail.com
REV. DATE DESCRIPTION APPROVED
DRAWN JAVED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED
PROJECT:
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
WATER STORAGE TANK PLAN & L-SECTION
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/PWST



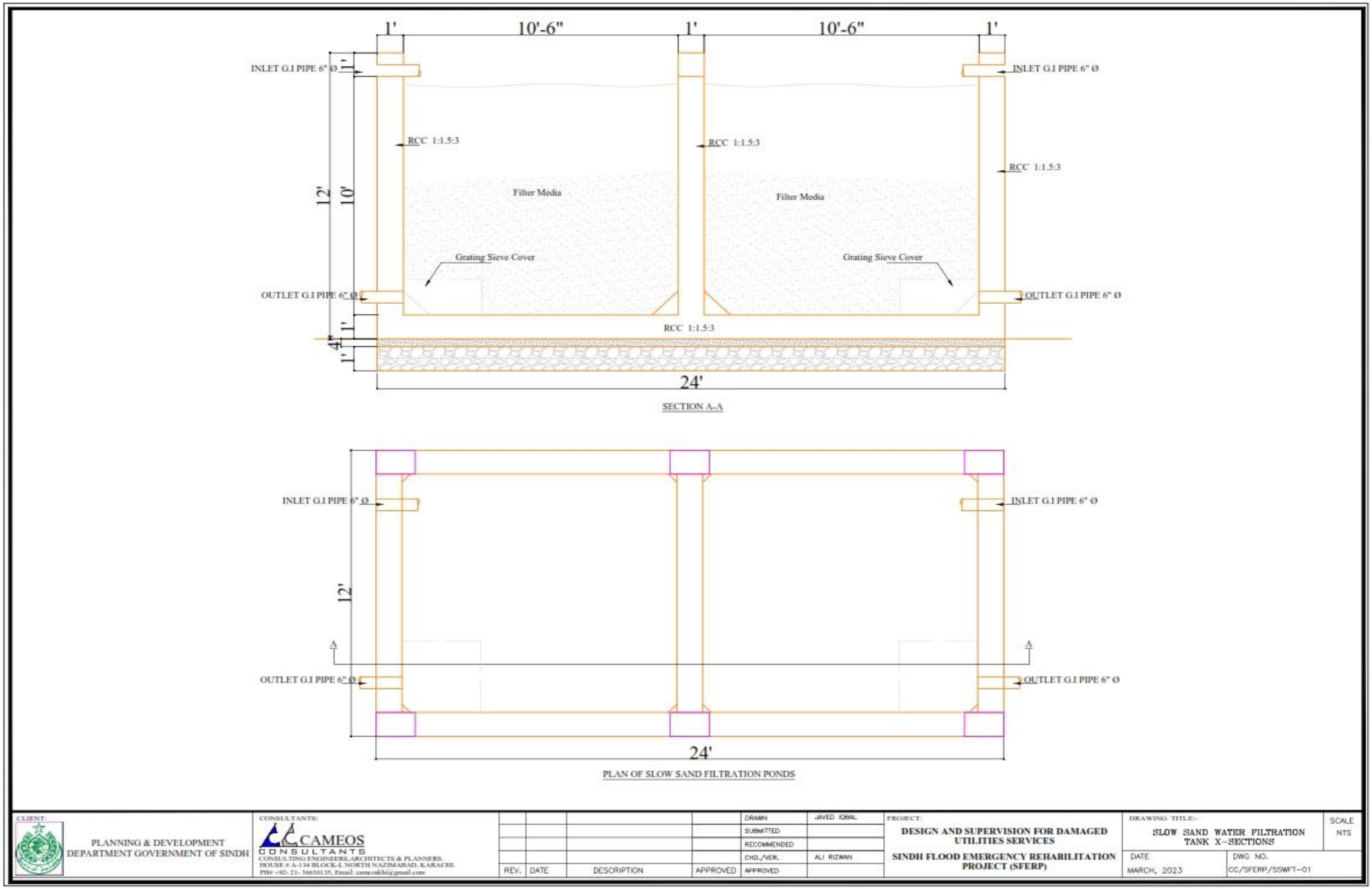
WATER STORAGE TANK X-SECTION

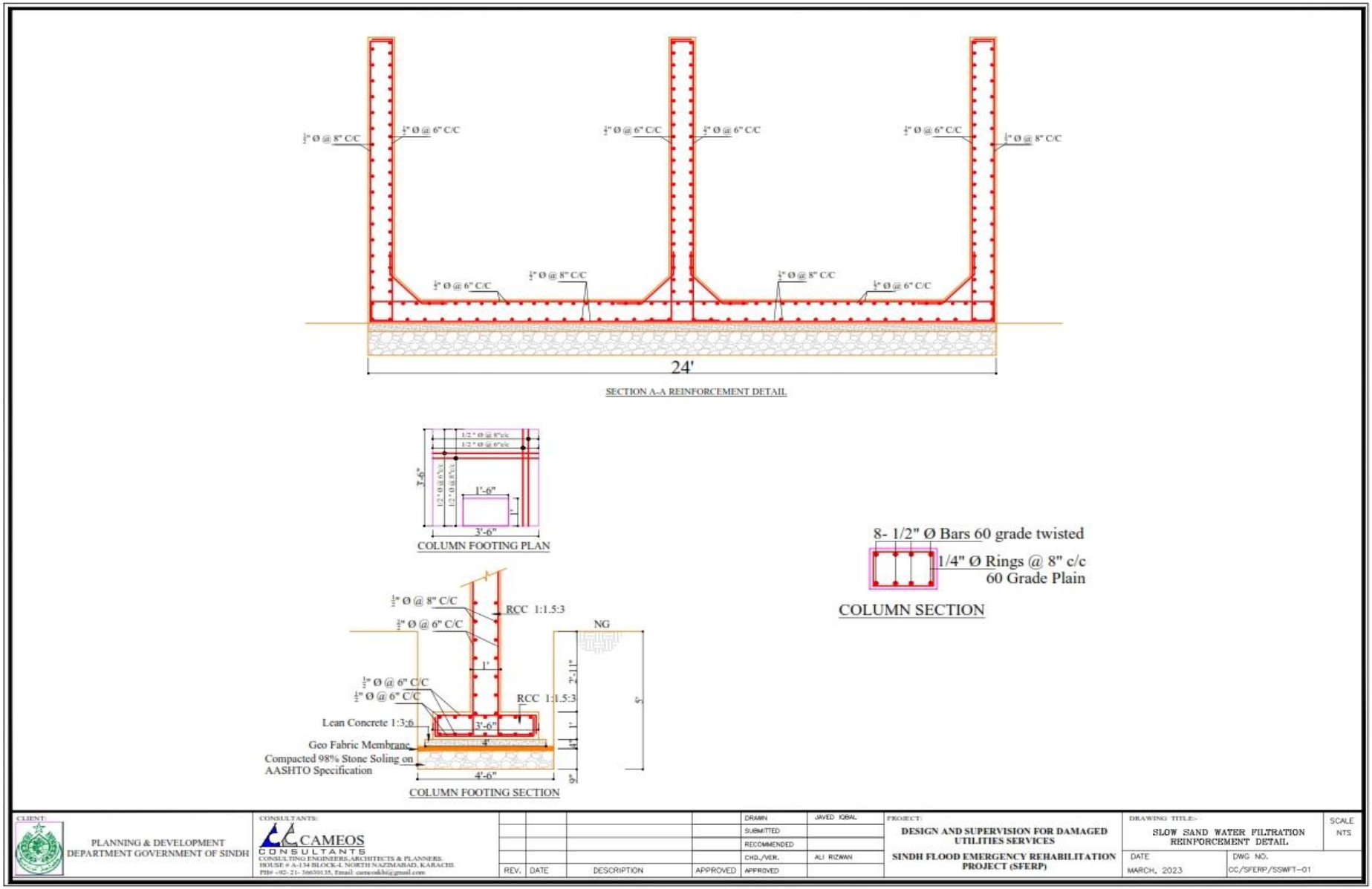


Detail of Expansion Joint

Note: Bitumastic Rubberized or Neoprene Rubber
Fixed Joint Sealant (Fix before laying of concrete)

CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # A-134 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36630135, Email: cameoskhi@gmail.com					DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)	DRAWING TITLE:- WATER STORAGE TANK X-SECTION & EXPANSION JOINT DETAIL	SCALE NTS
						SUBMITTED				
						RECOMMENDED				
						CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/WST-01
	REV.	DATE	DESCRIPTION		APPROVED	APPROVED				


1'
10'-6"
1'
10'-6"
1'
INLET G.I PIPE 6" Ø
INLET G.I PIPE 6" Ø
RCC 1:1.5:3
RCC 1:1.5:3
RCC 1:1.5:3
12'
10'
Filter Media
Filter Media
Grating Sieve Cover
Grating Sieve Cover
OUTLET G.I PIPE 6" Ø
OUTLET G.I PIPE 6" Ø
1'
RCC 1:1.5:3
4"
1'
24'
SECTION A-A
INLET G.I PIPE 6" Ø
INLET G.I PIPE 6" Ø
12'
A
A
OUTLET G.I PIPE 6" Ø
OUTLET G.I PIPE 6" Ø
24'
PLAN OF SLOW SAND FILTRATION PONDS
CLIENT:
PLANNING & DEVELOPMENT
DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS
CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS.
HOUSE # A-134 BLOCK-L NORTH NAZIMABAD, KARACHI.
PH# +92-21-36630135, Email: cameoskhi@gmail.com
REV.
DATE
DESCRIPTION
APPROVED
DRAWN
JAVED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER.
ALI RIZWAN
APPROVED
PROJECT:
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
DRAWING TITLE:-
SLOW SAND WATER FILTRATION TANK X-SECTIONS
SCALE
NTS
DATE
MARCH, 2023
DWG NO.
CC/SFERP/SSWFT-01


½" Ø @ 8" C/C
¼" Ø @ 6" C/C
¼" Ø @ 8" C/C
24'
SECTION A-A REINFORCEMENT DETAIL
3'-6"
1'-6"
COLUMN FOOTING PLAN
RCC 1:1.5:3
NG
Lean Concrete 1:3:6
Geo Fabric Membrane
Compacted 98% Stone Soling on AASHTO Specification
4'-6"
COLUMN FOOTING SECTION
8- 1/2" Ø Bars 60 grade twisted
1/4" Ø Rings @ 8" c/c
60 Grade Plain
COLUMN SECTION
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CAMEOS CONSULTANTS
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
SLOW SAND WATER FILTRATION REINFORCEMENT DETAIL
MARCH, 2023
CC/SFERP/SSWFT-01

ANNEXURE 3:

Attendence Sheets During Consultation

Annexure 3: Attendence Sheets During Consultation

Government of Sindh

SFERP
Project Implementation Unit (PIU)

Public Consultation on **Environmental and Social Screening Report (ESSR)** for **Rehabilitation of Damaged Water Supply and Drainage Schemes**
arranged by *Project Implementation Unit* **(PIU)** under *Sindh Flood Emergency Rehabilitation Project* **(SFERP)**, P&DD Component, **Government of Sindh**

خراب ٿيل پاڻي جي فراهمي ۽ نيڪال جي اسڪيمن جي بحالي لاءِ
ماحولياتي ۽ سماجي اسڪريننگ رپورٽ تي عوامي مشاورت
سنڌ فلڊ ايمرجنسي بحالي منصوبي (SFERP) تحت پروجيڪٽ
امپليمينٽيشن يونٽ (PIU) پاران ترتيب ڏنل.
P&DD جزو، حڪومت سنڌ

Location/جڳهه: ميرپور خاص ::Subproject Name/سب پروجيڪٽ جو نالو تاريخ/Date: 23-08-2023

Sr. No. سيريل نمبر	Name نالو	Fathers Name پيءُ جو نالو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Occupation/ Profession پيشو	Address: Village Name, Taluka ايڊريس: ڳوٺ جو نالو، تعلقو	Signature/ Thumb Impression دستخط / انگوٽي جو نشان
.1	ادباب علي	حاڪم علي	41104-4768167-1	صحافي	ڄمڊو ميرپور خاص	ادباب علي
.2	صهراب علي	احمد	41104-0741806-9	زراعت	" "	MEHRAB ALI

Page 1 of 6

Government of Sindh

SFERP

Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	چھوڑو میرپورخاص	دوکاندار	41104-2956653-9	محمد رمضان	نور حسن	.3
	" " "	یاری	44101-7529550-1	مشتاق	اللہ ڈنو	.4
پیار علی	" " "	جھرڑو	41104-7597818-6	رسول بخش	پیار علی	.5
	" " "	یاری	41104-8452095-5	غلام اکبر	رسول بخش	.6
بھارو	" " "	دوکاندار	41104-4919732-9	ڈیپو	Bharoo بھارو	.7
Parvez Ali	" " "	دوکاندار	41104-6170610-1	نیاز علی	پرویز علی	.8
YAR Muhammad	" " "	کسان	41101-6194230-1	افضل	یار محمد	.9
یوسف	" " "	دوکاندار	41104-3229033-1	اصغر	یوسف	.10
M. Ramzan	" " "	کسان	41104-7665088-5	راشد	محمد رمضان	.11

Page 2 of 6

Government of Sindh Digri

SFERP
Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو - تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	ڏگري ۽ ميرپورخاص	ياري	44101-6394900-2	بيعون مل	ستا بائي	.12
	" " "	ياوس وائف	44101-2071917-8	سليم	لقريت	.13
RUKIYA	" " "	ٹيلر	44101-6245503-0	محمد	رقيا	.14
	" "	ياوس وائف	44101-1372971-6	نوشاد	بختاور	.15
	" " "	ياري	44101-5393659-5	حنرات	عبدالقادر	.16
MAHIF	" " "	دوکان دار	44101-1268949-3	نور عالم	محمود احمد	.17
	" " "	ياري	44301-6602873-1	سنتوش	گنيش	.18
SAWAI MAL	" " "	کسان	44101-9696137-9	مادهو	سوائي مل	.19
	" " "	دوکان دار	44101-0427622-5	بالم	داهو	.20

Page 3 of 6

Government of Sindh

Got Ghulam Ali

SFERP
Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٹي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
تارو	گوٹھ غلام علی میرپورخاص	باڑی	44102-4189962-5	دا جو	تارو	.21
	" " "	مزدور	44102-7908258-9	کریم بخش	دلشاد رام	.22
ABid Ali	" " "	دوکاندار	44102-0625963-3	محبت	عابد علی	.23
الفت علی	" " "	کسان	44102-5879329-7	مشتاق احمد	الفت علی	.24
Faisal	" " "	دوکاندار	44102-8437238-1	علی رضا	فیصل رضا	.25
Shanawaz	" " "	کسان	41104-5993734-5	صبیر	شاہنواز	.26
	" " "	باڑی	44102-9085190-5	مولا بخش	پیارو	.27
	" " "	باڑی	44102-4047103-7	احمد	صنان	.28
M.KHAN	" " "	دوکاندار	41402-3755210-5	الہ بشر	محمد خان	.29

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Signature/ Thumb Impression دستخط / انگوٹي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
(thumb impression)	حسین بخش مری [illegible]	ہاری	4410313997457-7	رمضان	دونگ	.30
(thumb impression)	" " "	ہاؤس وائف	44105-3911521-4	نبات	بسرن	.31
(thumb impression)	" " "	" " "	44103-6967908-6	افضل	سلمہ	.32
فرزانہ	" " "	ہاؤس ورک	44103-3995590-6	سلیم	فرزانہ	.33
(thumb impression)	" " "	مزدور	44103-9243795-9	مظفر	سکندر	.34
Aslam	" " "	دوکاندار	44103-3544664-9	مومن	اسلم	.35
(thumb impression)	" " "	ہاری	44103-8325915-4	شیراز	درویش کوثر	.36
KELASH	" " "	کسان	44103-5004013-5	پرکاش	کلاش	.37
SHAH Muhammad	" " "	دوکاندار	44202-1522292-3	محمد معین	شاہ محمد	.38

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Signature/ Thumb Impression دستخط / انگوٹھي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	سندھ شہری میرپور خاص	ہاؤس وائف	44109-0605496-6	راسب	کرن	.39
[illegible]	" " "	دکان دار	441090362311-5	حیدر	فرا حین	.40
	" " "	ہاؤس و	44109-0351789-1	صغر	پیپن	.41
نادر	" " "	مزدور	44109-0367462-9	ذوہیب	نادر	.42
MEHNAZ	" " "	ہاؤس وائف	45403-7927576-2	اختر	مہناز	.43
نادش	" " "	ٹیلر	44103-56318870	وقاص	نادش	.44

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