Rehabilitation of Damaged Water Supply and Drainage Schemes of District Naushahro Feroz, Sindh

ENVIRONMENTAL AND SOCIAL SCREENING REPORT (ESSR)

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SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)

PLANNING & DEVELOPMENT DEPARTMENT (P&DD) COMPONENT

GOVERNMENT OF SINDH

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Final Report

May, 2024

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PLANNING & DEVELOPMENT DEPARTMENT (P&DD) COMPONENT, GOVERNMENT OF SINDH

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)**

Document Information

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Revision History:

Description	Issue	Revision	Date	Originated	Reviewed	Approved
ESSR for Rehabilitation of Damage Water Supply and Drainage Schemes of District Naushahro Feroz	01	-	03-05-2024	-	-	-

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, Naushahro Feroz, 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, Naushahro Feroz, 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 **Figure 2** and the details of the subproject sites are given below;

1.1 Sub-Project Description

In District Naushahro Feroz, there are a total of 74 schemes, comprising 66 drainage schemes and 08 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 Naushahro Feroz 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 Naushahro Feroz.
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 June 2024 after completion of pre-requisite requirements.

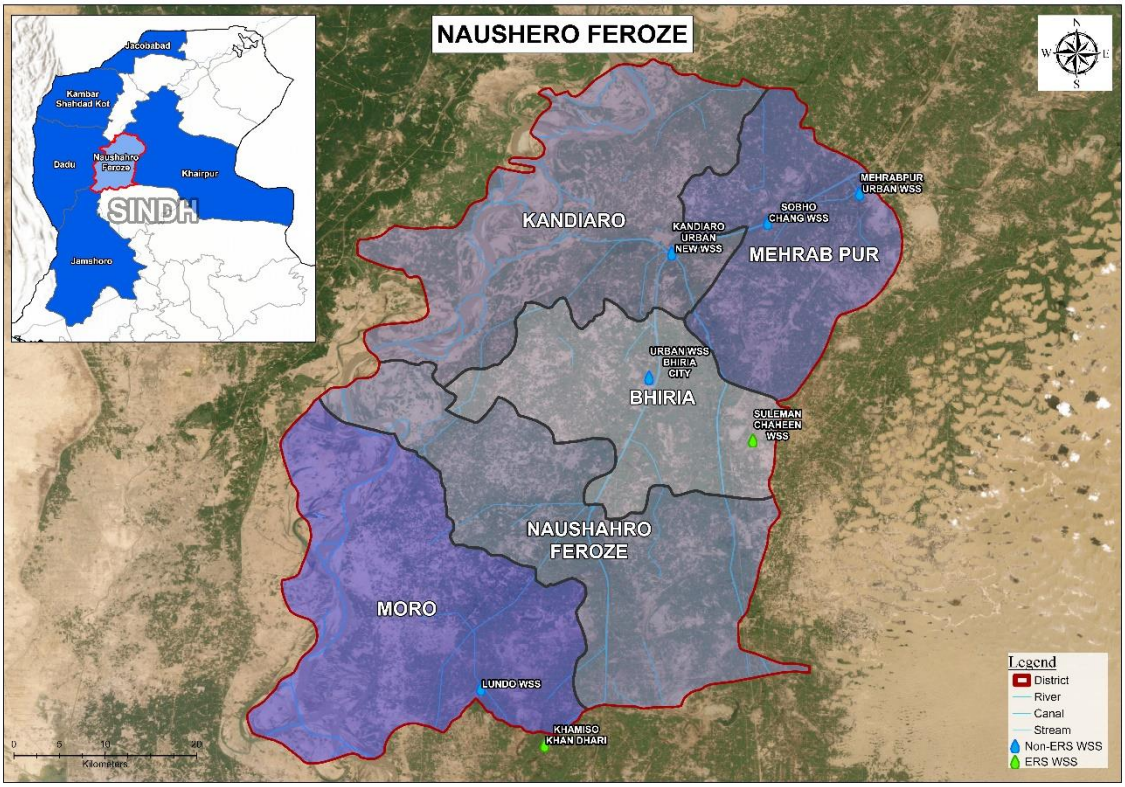


Figure 1: Study Area Map of District Naushahro Feroz Water Supply Schemes

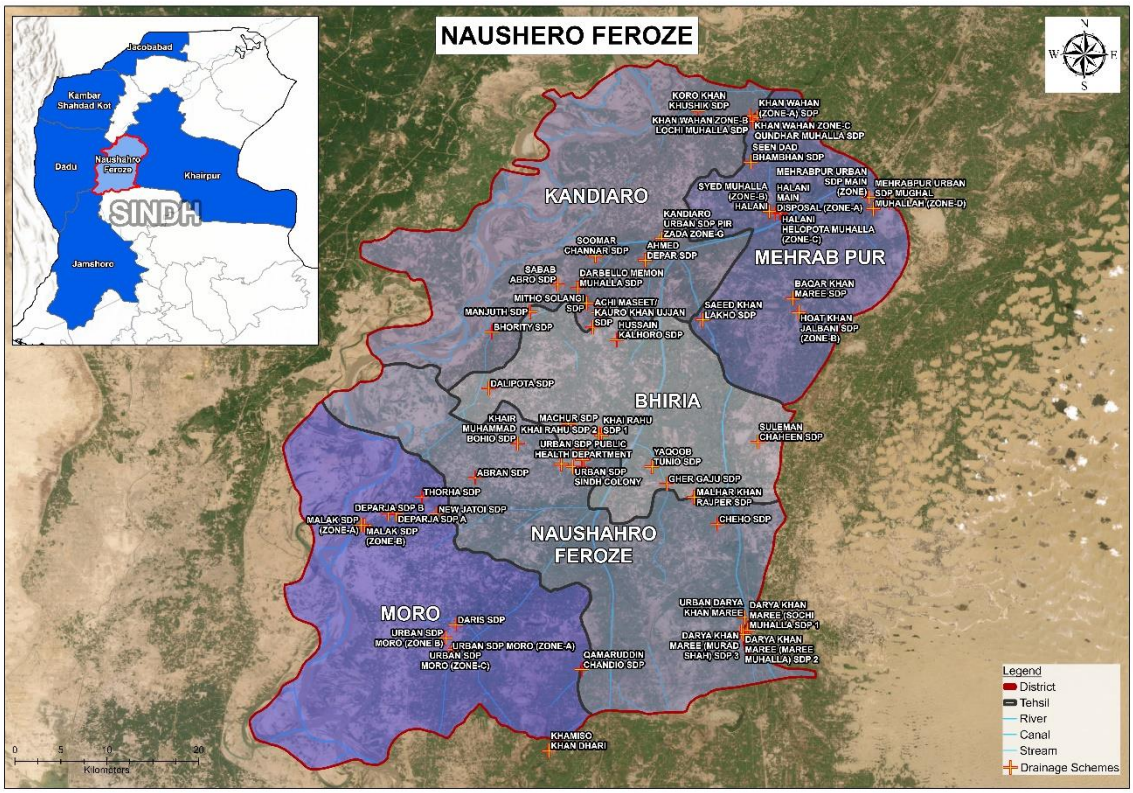


Figure 2: Study Area Map of District Naushahro Feroz Drainage Schemes

1.2 Scheme Wise E&S Setting

No.	Schemes	Source and Status	Coordinates	Site Description
A	**Taluka Mehrabpur Water Supply Schemes**			
1	Mehrabpur Urban Water Supply Scheme	Surface Water	442567 m E 2997573 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Mehrabpur Road when moving ahead from Naushahro Feroz. The number of household and population is 7857 & 55000 respectively. The area is surrounded by the urban settlements. There are a few social sensitive receptors in the vicinity of proposed site like educational, healthcare and religious facilities i.e., Govt. (N) Tameer-e-Millat high school 334 m, Madarsa tul madeena 216 m, Sher Shah Graveyard 306 m, and Shaheed Dr Amir Shahzad Medical Center Mehrabpur 610 m.
2	Sobho Chang Water Supply Scheme	Tube Well	432065 mE 2994761 mN	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Link Road when moving rightward from Halani. The number of household and population is 214 & 1500 respectively. The area is surrounded by agricultural fields and dispersed settlements. There are a few social sensitive receptors in the vicinity of proposed site like educational, facility i.e., GBPS Haji Mohram Halepoto 810 m, and Govt. Boys High school Halani 1.3 km. Rohri Canal is flowing side by side to sub-project site.
B	**Taluka Moro Water Supply Schemes**			
3	Khamiso Khan Dahri Water Supply Scheme	Tube Well ERS	409930 m E 2938376 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Moro Road when moving rightward from Moro City. The number of household and population is 200 & 1400 respectively. The area is surrounded by agricultural fields and dispersed settlements. There are no social sensitive receptors in the vicinity of proposed site.

No.	Schemes	Source and Status	Coordinates	Site Description
4	Lundo Water Supply Scheme	Tube Well	403631.33 m E 2944168.38 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Moro-Bandhi Road while moving from Moro. The number of household and population is 476 & 3330 respectively. The area is surrounded by the agricultural fields and scattered settlements. There are some social sensitive receptors around proposed project site like educational and healthcare facilities i.e., TCF - Moro School 510 m away and GD Lundo EPI Center 826 m away. A water body in the form of canal is flowing side by side to proposed sub-project site.
C	**Taluka Bhiria Water Supply Schemes**			
5	Bhiria City Water Supply Scheme	Surface Water	420371 m E 2977930 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side. The number of household and population is 2143 & 15000 respectively. The area is surrounded by the agricultural fields and settlements at a distance. There are some social sensitive receptors near to proposed sub-project site like educational and healthcare facilities i.e., Govt. Boys High School 1.13 km away and some private schools, however, only NICVD Chest Pain Unit in Bhiria City is present in terms of healthcare facility.
6	Suleman Chaheen Water Supply Scheme	Surface Water	430480 m E 2971045 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Pacca Chang Road. The number of household and population is 357 & 2500 respectively. The area is surrounded by the vacant land and settlements. There are not other social sensitive receptors except a healthcare facility i.e., Basic Health Unit Chanheen Suleman 500 m from proposed sub-project site.
D	**Taluka Kandiaro Water Supply Schemes**			

No.	Schemes	Source and Status	Coordinates	Site Description
7	Kandiaro Water Supply Scheme	Tube Well	422676 m E 2991486 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Hospital Road. The number of household and population is 5000 & 35000 respectively. The area is surrounded by the agricultural fields and settlements at a distance. There are some social sensitive receptors near to proposed sub-project site like educational, religious and healthcare facilities i.e., Govt Degree College Kandiaro at a distance of 1.3 km and Aladad Grand Mosque 1.07 km, however, there is no Govt. healtcare facility in the area except one or two provate clinics. Rohri Canal is flowing adjacent to sup-project site.
E	**Taluka Naushahro Feroze Water Supply Schemes**			
8	Urban Water Supply Scheme Darya Khan Maree	Tube Well	429035 m E 2952322 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Naushahro Feroz-Darya Khan Maree Road. The number of household and population is 1429 & 10,000 respectively. The area is surrounded by the agricultural fields and dispersed settlements at a distance. There are some social sensitive receptors far away from proposed sub-project site like religious and healthcare facilities i.e., graveyard and mosques, and a Civil Hospital at 1.22 km distance. Rohri Canal is flowing adjacent to sup-project site. A tributary of Rohri Canal is flowing at a distance of 269 m eastward.
F	**Taluka Mehrabpur Drainage Scheme**			
9	Mehrabpur Urban Disposal	Drainage Scheme	441299 m E 2997715 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Mehrabpur Road when moving ahead from Naushahro Feroz. The number of household and population is 3,571 & 25000 respectively. The area is surrounded by the urban settlements. There are a few social sensitive receptors in the

No.	Schemes	Source and Status	Coordinates	Site Description
				vicinity of proposed site like educational, and healthcare facilities i.e., Govt. high school 295 m and Mazhar Muslim Higher Secondary School 331 m, and Rural Health Centre 231 m.
10	Mughal Muhalla Zone-D Disposal	Drainage Scheme	441734 mE 2996458 mN	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Mehrabpur Road when moving ahead from Naushahro Feroz. The number of household and population is 2143 & 15000 respectively. The area is surrounded by the urban settlements, agricultural lands and vacant land. There are a few social sensitive receptors in the vicinity of proposed site like educational facilities i.e., Faqir Muhammad Arain Primary School 417 m and Oriental Law College Mehrabpur 436 m. Shaheed Dr. Amir Shahzad Medical Center Mehrabpur is 927 m away from proposed sub-project site.
11	Pir Wasan Zone-E Disposal	Drainage Scheme	443322 m E 2997093 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Mehrabpur Road when moving ahead from Naushahro Feroz. The number of household and population is 1429 & 10000 respectively. The area is surrounded by the urban settlements, agricultural lands and a waterbody. There are a few social sensitive receptors in the vicinity of proposed site like educational, religious and healthcare facilities i.e., SE Mehrabpur Campus 392 m, GD New Town Hospital Mehrabpur 339m and jamia faizan Ameer Hamza Masjid 429 m.
12	Halani Main Disposal Zone-A	Drainage Scheme	432207 m E 2996021 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Fatima Road when moving leftward from Halani. The number of household and population is 214 & 1500 respectively. The area is surrounded by human settlements. There are a few social sensitive receptors in the vicinity of

No.	Schemes	Source and Status	Coordinates	Site Description
				proposed site like educational, facility i.e., Government Boys High School Halani 81 m, Dargah halani shareef 198 m and Dr Akbar Medical Centre Halani 329 m.
13	Syed Muhalla Zone-B (Halani) Disposal	Drainage Scheme	431664 m E 2996253 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via internal streets when moving leftward from Halani. The number of household and population is 1,214 & 8500 respectively. The area is surrounded by human settlements and vacant land surrounded by water. There are no social sensitive receptors in the vicinity of proposed site.
14	Helepota Muhalla Zone-C (Halani) Disposal	Drainage Scheme	432721 m E 2996006 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via internal streets when moving rightward from Halani. The number of household and population is 357 & 2500 respectively. The area is surrounded by human settlements. There are no social sensitive receptors in the vicinity of proposed site.
15	Saeed Khan Lakho Disposal	Drainage Scheme	425151 m E 2984541 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via when moving back from Kandiaro. The number of household and population is 257 & 1800 respectively. The area is surrounded by the urban settlements and a waterbody. There are a few social sensitive receptors in the vicinity of proposed site like healthcare facility i.e., Saeed khan Lakho village hospital 178 m. A distributary, Kandiaro Minor is flowing next t proposed sub-project site.
16	Mitho Solangi Disposal	Drainage Scheme	413886 m E 2986413 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Somar Chanar link road while moving towards Kandiaro. The number of household and population is 264 & 1850 respectively. The area

No.	Schemes	Source and Status	Coordinates	Site Description
				is surrounded by the urban settlements, agricultural lands, orchards. There is only one social sensitive receptor i.e., a school, GBPS Amir Bux Solangi at a distance of 227 m.
17	Saeen Dad Bhambhan Disposal	Drainage Scheme	429893 m E 3001591 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Halani link road while moving towards Halani. The number of household and population is 286 & 2000 respectively. The area is surrounded by the scattered urban settlements and agricultural lands. There are no social sensitive in the vicinity of proposed sub-project site.
18	Hoat Khan Jalbani Disposal	Drainage Scheme	434468 m E 2985288 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Jam Nurullah-Kandiari link road while moving rightward from Kandiaro. The number of household and population is 286 & 2000 respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive in the vicinity of proposed sub-project site.
19	Lakha Road Disposal	Drainage Scheme	434469.34 m E 2985288.38 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Jam Nurullah-Kandiari link road while moving rightward from Kandiaro. The number of household and population is 1100 & 7700 respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive in the vicinity of proposed sub-project site except a school Govt Boys Higher secondary School Lakha Road at a distance of 188m.
20	Baqar Khan Mari Disposal	Drainage Scheme	433909 m E 2986806 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Jam Nurullah-Kandiari link road while moving rightward from Kandiaro. The number of household and population is 100 & 700

No.	Schemes	Source and Status	Coordinates	Site Description
				respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive in the vicinity of proposed sub-project site except a Primary school at a distance of 90 m. A canal distributary is flowing side by side to sub-project site.
G	**Taluka Moro Drainage Scheme**			
21	Urban Disposal Scheme Zone-A	Drainage Scheme	400424 m E 2948756 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Moro Main road within Moro city. The number of household and population is 1357 & 9500 respectively. The area is surrounded by the urban settlements, amenities and commercial land. There are no social sensitive in the vicinity of proposed sub-project site except Govt. Girls Degree College at a distance of 262 m.
22	Urban Disposal Scheme Zone-B	Drainage Scheme	399922 m E 2950280 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Dadu-Moro road within Moro city. The number of household and population is 1,714 & 12000 respectively. The area is surrounded by the urban settlements, amenities and commercial land. There are no social sensitive in the vicinity of proposed sub-project site except Government Elementary College of Education (W) Moro at a distance of 593 m.
23	Urban Disposal Scheme Zone-C	Drainage Scheme	400853 m E 2949068 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Moro-Bandhi road within Moro city. The number of household and population is 1,143 & 8000 respectively. The area is surrounded by the urban settlements. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational and healthcare facility i.e., The Insight Model Public School at

No.	Schemes	Source and Status	Coordinates	Site Description
				a distance of 33 m and Saba Noor Medical Center 127 m far away.
24	Thorha Disposal Scheme	Drainage Scheme	397726 m E 2965569 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Mithiani New Jataoi Road. The number of household and population is 400 & 2800 respectively. The area is surrounded by the urban settlements, fallow land and agricultural land. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational, religious and healthcare facility i.e., Abdul Qadir Jatoi Primary School and Government girls' school at a distance of 60 m and 133 m respectively. Basic Public Health Center is 459 m far away.
25	Daris Disposal Scheme	Drainage Scheme	400931 m E 2951707 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Dars Road. The number of household and population is 571 & 4000 respectively. The area is surrounded by the urban settlements, stagnant waterbody and graveyard. There are no social sensitive receptors in the vicinity of proposed sub-project site.
26	Departja Disposal-A	Drainage Scheme	395230 m E 2963736 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Departja Road. The number of household and population is 429 & 3000 respectively. The area is surrounded by the urban settlements and agricultural land. There are no social sensitive receptors in the immediate vicinity of proposed sub-project site but at a distance, there are a few shrines in the area and a healthcare facility i.e., Government Hospital Departja at a distance of 942 m.
27	Departja Disposal-B	Drainage Scheme	394450 m E 2963841 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Departja Road. The number of household and

No.	Schemes	Source and Status	Coordinates	Site Description
				population is 286 & 2000 respectively. The area is surrounded by the urban settlements and fallow lands. There are no social sensitive receptors in the immediate vicinity of proposed sub-project site but at a distance, there is a healthcare facility i.e., Kamran clinic deparja at a distance of 430 m.
28	Malak Disposal Scheme Zone-B	Drainage Scheme	391793 m E 2962579 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Deparja Road. The number of household and population is 357 & 2500 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational facility i.e., Government Girls High School Malak in south at a distance of 73 m.
29	Qamaruddin Chandio Disposal Scheme	Drainage Scheme	392121 m E 2962528 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Deparja Road. The number of household and population is 129 & 900 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational facility i.e., Government Primary School Boys New Malak in north at a distance of 125 m.
30	New Jatoi Disposal Scheme	Drainage Scheme	399156 m E 2963695 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Mithiani New Jataoi Road. The number of household and population is 571 & 4000 respectively. The area is surrounded by the urban settlements and agricultural land. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational facility i.e., Government Higher Secondary School and The Citizen Foundation

No.	Schemes	Source and Status	Coordinates	Site Description
				School, New Jatoi at a distance of 408 m and 682 m respectively.
31	Malak Disposal Scheme Zone-A	Drainage Scheme	391799.98 m E 2962569.46 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Deparja Road. The number of household and population is 604 & 4230 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational facility i.e., Government Girls High School Malak in south at a distance of 73 m.
H	**Taluka Bhiria Drainage Scheme**			
32	Gher Gaju Disposal Scheme	Drainage Scheme	421540 m E 2966823 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Padidan-Naushehro Feroz Road. The number of household and population is 786 & 5500 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational and healthcare facility i.e., Govt High School Gher Gaju at a distance of 455 m and Gher Gaju Hospital at a distance of 410 m.
33	Machur Disposal Scheme	Drainage Scheme	412041 m E 2973388 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Naushehro Feroz – Tharu Shah Road. The number of household and population is 286 & 2000 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational and healthcare facility i.e., Government High School at a distance of 530 m and RHC Machur at a distance of 336 m.

No.	Schemes	Source and Status	Coordinates	Site Description
34	Khahi Rahu Disposal-I	Drainage Scheme	415228 m E 2972135 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5. The number of household and population is 214 & 1500 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational and healthcare facility i.e., Goverment Boys Primary School Rajo Dahri at a distance of 425 m and BHU Kundha Khahi at a distance of 531 m.
35	Yaqoob Tunio Disposal Scheme	Drainage Scheme	420114 m E 2968690 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 via Naushehro Feroz-Padidan Road. The number of household and population is 1000 & 7000 respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive receptors in the vicinity of proposed sub-project site a healthcare facility i.e., Government Dispensary Hafiz Yakoob Tunio at a distance of 149 m.
36	Darya Khan Jalbani Disposal Scheme	Drainage Scheme	297521.07 m E 4217890.42 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 via Naushehro Feroz-Padidan Road. The number of household and population is 751 & 5260 respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive receptors in the vicinity of proposed sub-project site a healthcare facility i.e., Government Dispensary Hafiz Yakoob Tunio at a distance of 149 m.
37	Malhar Khan Rajper Disposal Scheme	Drainage Scheme	424180 m E 2965355 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 via Naushehro Feroz-Padidan Road. The number of household and population is 285 & 2000 respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive

No.	Schemes	Source and Status	Coordinates	Site Description
				receptors in the vicinity of proposed sub-project site.
38	Khahi Rahu Disposal Scheme	Drainage Scheme	414988 m E 2972285 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5. The number of household and population is 229 & 1600 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like educational and healthcare facility i.e., Goverment Boys Primary School Rajo Dahri at a distance of 425 m and BHU Kundha Khahi at a distance of 531 m.
39	Dalipota Disposal Scheme	Drainage Scheme	404319 m E 2977273 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 via Thaur Shah-Mithani Road. The number of household and population is 571 & 4000 respectively. The area is surrounded by the urban settlements and agricultural lands. There are some social sensitive receptors in the vicinity of proposed sub-project site like healthcare facility i.e., Govt Hospital Mehdiabad at a distance of 261 m.
40	Hussain Kalhoro Disposal Scheme	Drainage Scheme	4167080 m E 2982442 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 via Thaur Shah-Mithani Road. The number of household and population is 357 & 2500 respectively. The area is surrounded by the urban settlements and agricultural lands. There are no social sensitive receptors in the vicinity of proposed sub-project site.
41	Suleman Chaheen Disposal Scheme	Drainage Scheme	430408 m E 2971306 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Pacca Chang Road. The number of household and population is 357 & 2500 respectively. The area is surrounded by the vacant land and settlements. There are not other social sensitive

No.	Schemes	Source and Status	Coordinates	Site Description
				receptors except a healthcare facility i.e., Basic Health Unit Chanheen Suleman 500 m from proposed sub-project site.
I	**Taluka Kandiaro Drainage Scheme**			
42	Dabhro Drainage Scheme	Drainage Scheme	413054 m E 2988080 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kandiaro-Tharu Shah Road. The number of household and population is 720 & 5040 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational, healthcare and religious facility from proposed sub-project site i.e., GBPS Darbelo New - Primary school 142 m, Rural Health Center Darbelo at a distance of 266 m and some mosques around. A canal is flowing on the eastern side at a distance of 548 m from sub-project site.
43	Ahmed Depar Drainage Scheme	Drainage Scheme	419605 m E 2991019 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via link Road. The number of household and population is 357 & 2500 respectively. The area is surrounded by urban settlements and agricultural lands. There are no social sensitive receptors like educational, healthcare and religious facility around proposed sub-project site.
44	Muahmmad Khan Agro Drainage Scheme	Drainage Scheme	423655.31m E 3004355.47m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Khanwhan-Kandiaro Road. The number of household and population is 500 & 3500 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like healthcare and religious facility around proposed sub-project site i.e., a mosque 38 m, and a hospital at a distance of 235 m from sub-project site.

No.	Schemes	Source and Status	Coordinates	Site Description
45	Bhority Drainage Scheme	Drainage Scheme	404662 m E 2983368 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via link Road from Tharu Shah. The number of household and population is 400 & 2800 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like healthcare and educational facility around proposed sub-project site i.e., Mehro Mastoi - Primary school 187 m, Government Girls primary school Bhorti 367 m and Basic Health Unit Bhority at a distance of 328 m from sub-project site.
46	Darbellow Main Disposal Zone-A	Drainage Scheme	413054 m E 2988080 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kandiaro-Tharu Shah Road. The number of household and population is 314 & 2200 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational, healthcare and religious facility from proposed sub-project site i.e., GBPS Darbelo New - Primary school 142 m, Rural Health Center Darbelo at a distance of 266 m and some mosques around. A canal is flowing on the eastern side at a distance of 548 m from sub-project site.
47	Darbellow Rajput Muhalla Zone-B	Drainage Scheme	413546 m E 2988734 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kandiaro-Tharu Shah Road. The number of household and population is 571 & 4000 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational, healthcare and religious facility from proposed sub-project site i.e., Govt. Middle School 115 m, Rural Health Center Darbelo at a distance of 572 m and some mosques around. A canal is

No.	Schemes	Source and Status	Coordinates	Site Description
				flowing on the eastern side at a distance of 458 m from sub-project site.
48	Manjuth Drainage Scheme	Drainage Scheme	408402 m E 2985528 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via link Tharu Shah Road. The number of household and population is 300 & 2100 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational and religious facility from proposed sub-project site i.e., Government High School New Manjuth and Government Primary School New Manjuth 48 and 128 m respectively. Rural Health Center Darbelo at a distance of 572 m and some mosques around. A canal is flowing on the eastern side at a distance of 442 m from sub-project site.
49	Molay Dino Larik Drainage Scheme	Drainage Scheme	415031 m E 2985368 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Moule Dino Link Road. The number of household and population is 214 & 1500 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational and religious facility from proposed sub-project site i.e., Boys Middle School 45 m and Basic Health Unit Moledino Larik at a distance of 186 m from sub-project site.
50	Hamid Ujjan Drainage Scheme	Drainage Scheme	422163.31 m E 2994508.52 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Mohabet Dero Jatoi Road. The number of household and population is 149 & 1040 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational and healthcare facility from proposed sub-project site i.e., Isra School Kandiaro Cump

No.	Schemes	Source and Status	Coordinates	Site Description
				High School 259 m and Isra Hospital Kandiaro at a distance of 333 m from sub-project site.
51	Koro Khan Khushik Drainage Scheme	Drainage Scheme	424825 m E 3007153 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kotri M Kabir Khanwah Road. The number of household and population is 500 & 3500 respectively. The area is surrounded by urban settlements and agricultural lands. There are no social sensitive receptors except educational facility i.e., GBELS Kouro Khushik at a distance of 422 m from sub-project site.
52	Sabab Abro Drainage Scheme	Drainage Scheme	411080 m E 2988472 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side Link Road from Darbello Rajput Goth. The number of household and population is 357 & 2500 respectively. The area is surrounded by urban settlements and agricultural lands. There are only one social sensitive receptor like educational facility from proposed sub-project site i.e., Government Primary School Noor Muhammad Kalo at a distance of 356m.
53	Kandiaro Disposal Zone - A	Drainage Scheme	422062 m E 2993115 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side. The number of household and population is 1000 & 7000 respectively. The area is surrounded by urban settlements. There are some social sensitive receptors like educational and healthcare facility from proposed sub-project site i.e., Government Boys High School at a distance of 184 m and Kandiaro – Hospital 113 m away.
54	Kandiaro Urban Disposal Pir Zada Zone-G	Drainage Scheme	421243 m E 2993352 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side. The number of household and population is 1000 & 7000 respectively. The area is surrounded by urban settlements. There are some social sensitive receptors like educational facility

No.	Schemes	Source and Status	Coordinates	Site Description
				from proposed sub-project site i.e., Govt. Primary School Muhammad Siddique Hisbani Kandiaro - Primary school and Govt. Primary School Noorullah Hisbani at a distance of 143 m and 240 m respectively.
55	Kandiaro Zone-F Tharu shah Naka Disposal	Drainage Scheme	421443.56 m E 2993149.55 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side. The number of household and population is 1000 & 7000 respectively. The area is surrounded by urban settlements. There are some social sensitive receptors like educational facility from proposed sub-project site i.e., Govt. Primary School Muhammad Siddique Hisbani Kandiaro - Primary school at a distance of 190 m.
56	Muhbat Dero Jatoi Drainage Scheme	Drainage Scheme	423757.03 m E 3002409.06 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via link Road from Halani. The number of household and population is 174 & 1220 respectively. The area is surrounded by urban settlements and agricultural land. There are some social sensitive receptors like educational and healthcare facility from proposed sub-project site i.e., GBPS Ali Wahan - Primary school at a distance of 478 m and PPHI Hospital at 1.03 km.
57	Achi Maseet and Koro Ujjan Drainage Scheme	Drainage Scheme	414477 m E 2983804 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via link Road from Tharu Shah. The number of household and population is 214 & 1500 respectively. The area is surrounded by urban settlements and agricultural land. There are some social sensitive receptors like educational and healthcare facility from proposed sub-project site i.e., G(B&G) H School Kauro Khan Ujjan and Achi masjid kauro khan ujan School at a distance of 433 m and 435 km.

No.	Schemes	Source and Status	Coordinates	Site Description
58	Bazeedpur Drainage Scheme	Drainage Scheme	426066.32 m E 2987019.67 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side. The number of household and population is 895 & 6270 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational and healthcare facility from proposed sub-project site i.e., Govt. Primary School BazidPur at a distance of 210 m and Basic Health Unit Bazid Pur at 519 m.
59	Khan Wahan Zone-A Disposal	Drainage Scheme	430546 m E 3006357 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kotri M Kabor KhanWahan Link Road. The number of household and population is 429 & 3000 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Govt. primery school Khad and Government Higher Secondary School Khan Wahan at a distance of 562 and 629 m respectively and Basic Health Unit KhanWahan at 799 m.
60	Khan Wahan Zone-B Lochi Muhalla Disposal	Drainage Scheme	429892 m E 3006565 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kotri M Kabor KhanWahan Link Road. The number of household and population is 357 & 2500 respectively. The area is surrounded by urban settlements and agricultural lands. There are no social sensitive receptors around proposed sub-project site.
61	Khan Wahan Zone-C Qundhar Muhalla Disposal	Drainage Scheme	430076 m E 3005987 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Kotri M Kabor KhanWahan Link Road. The number of household and population is 500 & 3500 respectively. The area is surrounded by urban settlements and agricultural lands. There are

No.	Schemes	Source and Status	Coordinates	Site Description
				some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Government Higher Secondary School Khan Wahan at a distance of 78m and and Basic Health Unit KhanWahan at 357 m.
62	Soomar Channar Drainage Scheme	Drainage Scheme	414782 m E 2991525 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Khadro-Tharu shah Road. The number of household and population is 500 & 3500 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Govt girls' primary school and Govt High School Soomar Channar 119m and 55 m respectively and Govt. Hospital at 404 m.
J	**Taluka Naushahro Feroze Drainage Schemes**			
63	Urban Drainage Scheme (Talib Solangi) Naushahro Feroze	Drainage Scheme	413424 m E 2969477 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side. The number of household and population is 643 & 4500 respectively. The area is surrounded by urban settlements and recreational land. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Talib Solangi-Primary school 129 m and Fauji Foundation Health Clinic at 682 m.
64	Sindh Colony Disposal	Drainage Scheme	412429 m E 2968708 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side. The number of household and population is 3571 & 25000 respectively. The area is surrounded by urban settlements, commercial and recreational land. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., EMS Naushehro Feroze - School and Govt Maddressah High

No.	Schemes	Source and Status	Coordinates	Site Description
				School 120 m and 240 m respectively and Civil Hospital Naushahro Feroze at 385 m.
65	Public Health Disposal	Drainage Scheme	413353 m E 2969500 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side. The number of household and population is 643 & 4500 respectively. The area is surrounded by urban settlements and recreational land. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Talib Solangi-Primary school 129 m and Fauji Foundation Health Clinic at 682 m.
66	Seral Disposal	Drainage Scheme	413393 m E 2968653 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Padidan Road Bypass. The number of household and population is 2857 & 20000 respectively. The area is surrounded by urban settlements and agricultural land. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Vista International Public-School Office 127 m and Civil Hospital Naushahro Feroze at 585 m.
67	Mehran Colony Disposal	Drainage Scheme	411293 m E 2969032 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Padidan Road Bypass. The number of household and population is 900 & 6300 respectively. The area is surrounded by urban settlements. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Dua Public School Naushahro Feroze and IBA Community College Naushahro Feroze 418 m and 374 m respectively and DHO Office Naushahro Feroze – Hospital at 644 m.
68	Hifza Colony Disposal	Drainage Scheme	413179 m E 2970583 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side. The

No.	Schemes	Source and Status	Coordinates	Site Description
				number of household and population is 142 & 1000 respectively. The area is surrounded by urban settlements. There are some social sensitive receptors like educational facility around proposed sub-project site i.e., The Allied School 558 m.
69	Darya Khan Maree (Sochi Muhalla Disposal)	Drainage Scheme	429322 m E 2950957 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Naushahro Feroz-Darya Khan Mari Road. The number of household and population is 1000 & 7000 respectively. The area is surrounded by urban settlements. There are some social sensitive receptors like educational and healthcare facility around proposed sub-project site i.e., Kiran Public Elementary School By TSA AD Malik 265 and Peoples Charitable Hospital at 195 m.
70	Darya Khan Maree (Murad Shah) Disposal	Drainage Scheme	428670 m E 2950794 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Naushahro Feroz-Darya Khan Mari Road. The number of household and population is 1428 & 10,000 respectively. The area is surrounded by urban settlements and vacant lands. There are no social sensitive receptors around proposed sub-project site.
71	Darya Khan Maree (Maree Muhallah) Disposal	Drainage Scheme	428887 m E 2950465 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Naushahro Feroz-Darya Khan Mari Road. The number of household and population is 142 & 1000 respectively. The area is surrounded by urban settlements and vacant lands. There are no social sensitive receptors around proposed sub-project site.
72	Khair Muhammad Bohio	Drainage Scheme	407068 m E 2971287 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the left side via Naushahro Feroz-Mithiani Road. The number of household and population is 714 & 5000

No.	Schemes	Source and Status	Coordinates	Site Description
	Drainage Scheme			respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors around proposed sub-project site like educational facility i.e., Government High School Khair Muhammad Bohio at a distance of 351m.
73	Cheho Drainage Scheme	Drainage Scheme	426433 m E 2962433 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Naushahro Feroz-Padidan Road. The number of household and population is 2857 & 20000 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors around proposed sub-project site like educational facility i.e., Government Girls High School Cheeho at a distance of 274 m.
74	Abran Drainage Scheme	Drainage Scheme	402935 m E 2967615 m N	The proposed site is located in District Naushahro Feroz, it can be easily accessible by National Highway N5 on the right side via Naushahro Feroz-Mithani Road. The number of household and population is 857 & 6000 respectively. The area is surrounded by urban settlements and agricultural lands. There are some social sensitive receptors around proposed sub-project site like educational and healthcare facility i.e., Government Boys High & Campus School Abran and Rehman Public School Channa Muhalla at a distance of 174 m and 299m respectively, Amjad Clinic and Government Dispensary Abran at a distance of 331 m and 518m respectively.

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 Naushahro Feroz, Sindh, within the Government territory, specifically under the jurisdiction of the Public Health Engineering Department (PHED). The district has five Talukas; Bhiria Taluka, Kandiaro Taluka, Moro Taluka, Naushero Feroze Taluka, and Mehrabpur 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 Naushahro Feroz has been suffering from a

lack of safe drinking water due to high salinity as well as water contaminations 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 aforementioned district lacks the presence of nearby main canals, sub-canals, or main distributary channels, resulting in the installation of bore water wells. To identify areas with access to abundant and good-quality water, there arises a requirement for conducting an Electric Resistivity Survey (ERS). In close alignment with the ERS findings and community water demands, the design phase ensued. New water sources, typically adjacent canals or watercourses, were identified and integrated into existing infrastructure. In cases where existing distribution networks were damaged, new pumping stations and distribution networks will be established.

The drinking water 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 Naushahro Feroz 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 Naushahro Feroz 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 Naushahro Feroz, 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 Naushahro Feroz.

i. Flora of Sub-Project Area

The major trees observed along the roads and canal banks include eucalyptus or sufaida (*Manilkara zapota*), cono or common tug tree (*Conocarpus lanrcifolius*), neem (*Azardica indica*) and West Indian pea or manjadri (*Agati grandiflora*). Other flora of irrigated areas observed during survey are gum Arabica or babul (*Acacia nilotica*), neem (*Azadirachta indica*), amaltas (*Cassia fistula*), Ethiopian teak or kono (*Conocarpus lancifolius*), shisham (*Dalbergia sissoo*), sufaida (*Eucalyptus camaldulensis*), banyan tree or bargad (*Ficus benghalensis*), jungle jalaibee or Manila tamarind (*Pithecellobium dulce*), silk cotton tree or simal (*Salmalia malabarica*), Egyptian pea or jantar (*Sesbania aegyptiaca*), arjun tree (*Terminalia arjuna*), and tulip tree or pipal (*Thespesia populnea*).

Important crops are wheat, barley, gram, tobacco, rapeseed and mustard, cotton, rice, sugarcane, jowar, bajra, maize, sesanum, moong, masoor, sugar beet, guar seed, linseed, and sunflower[1].

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

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.

The avifauna includes doves, black and grey partridges, cuckoos, koel, woodpeckers, parakeets, bulbuls, babblers, black drongos, bee-eaters, finches, and house sparrows, bank mynas, cattle egrets, pigeons, kites, crows, mynas, and Alexandrines are found during survey.

1.3.3 Socio-Economic Condition of the Sub-Project Area

The total population of the district Naushahro Feroz is 1,612,047 persons with 64% 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 and Christians also hold great confidence in the district. The languages mostly spoken in District are Sindhi, Balochi, Punjabi, Saraiki and Urdu. However, Urdu is understood amongst all the population of district. The economy of Naushahro Feroz is mainly based on Agriculture with its allied Livestock Breeding, Fishing & Hunting (56%), Elementary Occupations (30%), Others (14%). Major industries in the district Naushahro Feroz are Flour Mills (02 Units), Cotton Ginning & Pressing (03 Units), Cotton Ginning & Oils Mills (11 Units), MDF Board Industry (01 Unit), Rice Mills (02 Units)[3].

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 November, 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 centers (BHU/RHC), hospitals, schools, cultural and archeological aspects etc. were observed during the survey. 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 Naushahro Feroz. 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.

[2] https://www.pbs.gov.pk/census-2017-district-wise/results/102

[3] https://pakistanalmanac.com/sindh-naushero-feroze/#1633497051692-7046db05-a3ea

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.

1.3.7 Timeframe for starting and completion of sub-project

The subproject will be started in June, 2024 and will be completed in June, 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 Naushahro Feroz 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 Mehrabpur Drainage Schemes									
Mehrabpur Urban Disposal	25,000	8.8	220000.0	25,883	8.8	227767.4	39,936	8.8	351440.6
Mughal Muhalla Zone-D Disposal	15,000	8.8	132000.0	15,530	8.8	136660.4	23,962	8.8	210864.4
Pir Wasan Zone-E Disposal	10,000	8.8	88000.0	10,353	8.8	91107.0	15,975	8.8	140576.3
Halani Main Disposal Zone-A	1,500	8.8	13200.0	1,553	8.8	13666.0	2,396	8.8	21086.4
Syed Muhalla Zone-B (Halani) Disposal	8,500	8.8	74800.0	8,800	8.8	77440.9	13,578	8.8	119489.8
Helepota Muhalla Zone-C (Halani) Disposal	2,500	8.8	22000.0	2,588	8.8	22776.7	3,994	8.8	35144.1
Saeed Khan Lakho Disposal	1,800	8.8	15840.0	1,864	8.8	16399.3	2,875	8.8	25303.7
Mitho Solangi Disposal	1,850	8.8	16280.0	1,915	8.8	16854.8	2,955	8.8	26006.6
Saeen Dad Bhambhan Disposal	2,000	8.8	17600.0	2,071	8.8	18221.4	3,195	8.8	28115.3
Hoat Khan Jalbani Disposal	2,000	8.8	17600.0	2,071	8.8	18221.4	3,195	8.8	28115.3
Lakha Road Disposal	7,700	8.8	67760.0	7,972	8.8	70152.4	12,300	8.8	108243.7
Baqar Khan Mari Disposal	700	8.8	6160.0	725	8.8	6377.5	1,118	8.8	9840.3
G. Taluka Moro Drainage Schemes									
Urban Drainage Scheme Zone-A	9,500	8.8	83600.0	10,353	8.8	91107.0	15,975	8.8	140576.3
Urban Drainage Scheme Zone-B	12,000	8.8	105600.0	12,424	8.8	109328.3	19,169	8.8	168691.5
Urban Drainage Scheme Zone-C	8,000	8.8	70400.0	8,282	8.8	72885.6	12,780	8.8	112461.0
Thorha Drainage Scheme	2,800	8.8	24640.0	2,899	8.8	25509.9	4,473	8.8	39361.4
Daris Drainage Scheme	4,000	8.8	35200.0	4,141	8.8	36442.8	6,390	8.8	56230.5

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
Departja Disposal-A	3,000	8.8	26400.0	3,106	8.8	27332.1	4,792	8.8	42172.9
Departja Disposal-B	2,000	8.8	17600.0	2,071	8.8	18221.4	3,195	8.8	28115.3
Malak Drainage Scheme Zone-B	2,500	8.8	22000.0	2,588	8.8	22776.7	3,994	8.8	35144.1
Qamaruddin Chandio Drainage Scheme	900	8.8	7920.0	932	8.8	8199.6	1,438	8.8	12651.9
New Jatoi Drainage Scheme	4,000	8.8	35200.0	4,141	8.8	36442.8	6,390	8.8	56230.5
Malak Drainage Scheme Zone-A	4,230	8.8	37224.0	4,379	8.8	38538.2	6,757	8.8	59463.8
H. Taluka Bhiria Drainage Schemes									
Gher Gaju Drainage Scheme	5,500	8.8	48400.0	5,694	8.8	50108.8	8,786	8.8	77316.9
Baqar Khan Mari Disposal	700	8.8	6160.0	2,071	8.8	18221.4	3,195	8.8	28115.3
Khahi Rahu Disposal-I	1,500	8.8	13200.0	1,553	8.8	13666.0	2,396	8.8	21086.4
Yaqoob Tunio Drainage Scheme	7,000	8.8	61600.0	7,247	8.8	63774.9	11,182	8.8	98403.4
Darya Khan Jalbani Drainage Scheme	5,260	8.8	46288.0	5,446	8.8	47922.3	8,403	8.8	73943.1
Malhar Khan Rajper Drainage Scheme	2,000	8.8	17600.0	2,071	8.8	18221.4	3,195	8.8	28115.3
Khahi Rahu Drainage Scheme	1,600	8.8	14080.0	1,656	8.8	14577.1	2,556	8.8	22492.2
Dalipota Drainage Scheme	4,000	8.8	35200.0	4,141	8.8	36442.8	6,390	8.8	56230.5
Hussain Kalhoro Drainage Scheme	2,500	8.8	22000.0	2,588	8.8	22776.7	3,994	8.8	35144.1
Suleman Chaheen Drainage Scheme	1,600	8.8	14080.0	1,656	8.8	14577.1	2,556	8.8	22492.2
I. Taluka Kandiaro Drainage Schemes									
Dabhro Drainage Scheme	5,040	8.8	44352.0	5,218	8.8	45917.9	8,051	8.8	70850.4
Ahmed Depar Drainage Scheme	2,500	8.8	22000.0	2,588	8.8	22776.7	3,994	8.8	35144.1

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
Muahmmad Khan Agro Drainage Scheme	3,500	8.8	30800.0	4,379	8.8	38538.2	5,591	8.8	49201.7
Darbellow Main Disposal Zone-A	2,200	8.8	19360.0	2,899	8.8	25509.9	4,473	8.8	39361.4
Darbellow Rajput Muhalla Zone-B	4,000	8.8	35200.0	2,278	8.8	20043.5	3,514	8.8	30926.8
Manjuth Drainage Scheme	2,100	8.8	18480.0	4,141	8.8	36442.8	6,390	8.8	56230.5
Molay Dino Larik Drainage Scheme	1,500	8.8	13200.0	2,174	8.8	19132.5	3,355	8.8	29521.0
Hamid Ujjan Drainage Scheme	1,040	8.8	9152.0	1,553	8.8	13666.0	2,396	8.8	21086.4
Koro Khan Khushik Drainage Scheme	3,500	8.8	30800.0	1,077	8.8	9475.1	1,661	8.8	14619.9
Sabab Abro Drainage Scheme	2,500	8.8	22000.0	3,624	8.8	31887.4	5,591	8.8	49201.7
Kandiaro Disposal Zone - A	7,000	8.8	61600.0	2,588	8.8	22776.7	3,994	8.8	35144.1
Kandiaro Urban Disposal Pir Zada Zone-G	7,500	8.8	66000.0	7,247	8.8	63774.9	11,182	8.8	98403.4
Kandiaro Zone-F Tharoshah Naka Disposal	4,550	8.8	40040.0	7,765	8.8	68330.2	11,981	8.8	105432.2
Muhbat Dero Jatoi Drainage Scheme	1,220	8.8	10736.0	4,711	8.8	41453.7	7,268	8.8	63962.2
Achi Maseet and Koro Ujjan Drainage Scheme	1,500	8.8	13200.0	1,263	8.8	11115.0	1,949	8.8	17150.3
Ahmed Depar Drainage Scheme	2,500	8.8	22000.0	1,553	8.8	13666.0	2,396	8.8	21086.4
Khan Wahan Zone-A Disposal	3,000	8.8	26400.0	6,491	8.8	57124.1	10,016	8.8	88141.3
Khan Wahan Zone-B Lochi Muhalla Disposal	2,500	8.8	22000.0	3,106	8.8	27332.1	4,792	8.8	42172.9

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
Khan Wahan Zone-C Qundhar Muhalla Disposal	3,500	8.8	30800.0	2,588	8.8	22776.7	3,994	8.8	35144.1
Soomar Channar Drainage Scheme	3,500	8.8	30800.0	3,624	8.8	31887.4	5,591	8.8	49201.7
J. Taluka Naushahro Feroze Drainage Schemes									
Urban Drainage Scheme (Talib Solangi) Naushahro Feroze	4,500	8.8	39600.0	4,659	8.8	40998.1	7,189	8.8	63259.3
Sindh Colony Disposal	25,000	8.8	220000.0	25,883	8.8	227767.4	39,936	8.8	351440.6
Public Health Disposal	30,000	8.8	264000.0	31,059	8.8	273320.9	47,924	8.8	421728.8
Seral Disposal	20,000	8.8	176000.0	20,706	8.8	182213.9	31,949	8.8	281152.5
Mehran Colony Disposal	6,300	8.8	55440.0	6,522	8.8	57397.4	10,064	8.8	88563.0
Hifza Colony Disposal	1,000	8.8	8800.0	7,765	8.8	68330.2	1,597	8.8	14057.6
Darya Khan Maree (Sochi Muhalla Disposal)	7,000	8.8	61600.0	7,247	8.8	63774.9	11,182	8.8	98403.4
Muhbat Dero Jatoi Drainage Scheme	1,220	8.8	10736.0	10,353	8.8	91107.0	15,975	8.8	140576.3
Darya Khan Maree (Maree Muhallah Disposal	1,000	8.8	8800.0	1,035	8.8	9110.7	1,597	8.8	14057.6
Khair Muhammad Bohio Drainage Scheme	5,000	8.8	44000.0	5,177	8.8	45553.5	7,987	8.8	70288.1
Cheho Drainage Scheme	20,000	8.8	176000.0	20,706	8.8	182213.9	31,949	8.8	281152.5
Abran Drainage Scheme	6,000	8.8	52800.0	6,212	8.8	54664.2	9,585	8.8	84345.8

Table 3: Population Size and Water Supply Demand of District Naushahro Feroz 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 Naushahro Feroz									
A. Taluka Mehrabpur Water Supply Schemes									
Water Supply Scheme of Mehrabpur Urban	55,000	11	605000.0	56,942	11	626360.3	87,860	11	966461.7
Water Supply Scheme Sobho chang	1,500	11	16500.0	1,553	11	17082.6	2,396	11	26358.0
B. Taluka Moro Water Supply Schemes									
Water Supply Scheme Lundo	3,330	11	36630.0	3,448	11	37923.3	5,320	11	58514.9
Water Supply Scheme Khamiso Khan Dahri	1,400	11	15400.0	1,449	11	15943.7	2,236	11	24600.8
C. Taluka Bhiria Water Supply Scheme									
Water Supply Scheme of Bhiria City	15,000	11	165000.0	15,530	11	170825.5	23,962	11	263580.5
Water Supply Scheme of Suleman Chaheen	2,500	11	27500.0	2,588	11	28470.9	3,994	11	43930.1
D. Taluka Kandiaro Water Supply Scheme									
Water Supply Scheme Kandiaro	30,000	11	330000.0	31,059	11	341651.1	47,924	11	527160.9
E. Taluka Naushahro Feroze 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 Naushahro Feroz									
Urban Water Supply Scheme Darya Khan Maree	10,000	11	110000.0	10,353	11	113883.7	10,000	11	110000.0

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	Naushahro Feroz 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 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 poor 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 any work outside the boundary and establishment 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 obstruct access routes 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. • 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.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• 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 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.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
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?	√	□	□	□	□	□	No, construction work will be performed near wastewater or storm water drains as it will only be limited to pumping station boundary. To ensure the quality of wastewater before disposing is not in the scope of work. Wastewater quality analysis will be performed complaint to SEQS 2016 so that characteristics of wastewater could be recorded.
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. • Provision of first aid facilities for workers at site for meeting the emergency needs of workers, and providing basic medical training to

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								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.
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.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
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. • No Hazardous and non-hazardous waste will be dumped outside any community.

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
								• 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. • Workers should not be allowed to crowd in the residential communities nearby the site.
30.	Are appropriate measures taken to	√	□	□	□	□	□	Yes, as the security guards will be deployed at subproject sites and they

S. No	SCREENING QUESTIONS	Yes	No	Impact Severity Ranking				Remarks/Mitigation Measures
				NR	1	2	3	
	ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?							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 Naushahro Feroz

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
A	**Taluka Mehrabpur Water Supply Schemes**			
1	Mehrabpur Urban Water Supply Scheme	442567 m E 2997573 m N	Shah Goth Mehrabpur	3/11/2023
2	Sobho Chang Water Supply Scheme	432065 mE 2994761 mN	Halani, Naushahro Feroze	3/11/2023
B	**Taluka Moro Water Supply Schemes**			
3	Khamiso Khan Dahri Water Supply Scheme	409930 m E 2938376 m N	Khamiso Khan Dahri Goth	5/11/2023
4	Lundo Water Supply Scheme	403631.33 m E 2944168.38 m N	Lundo Goth Moro	5/11/2023
C	**Taluka Bhiria Water Supply Schemes**			
5	Bhiria City Water Supply Scheme	420371 m E 2977930 m N	Ghalibani Mohalla	1/11/2023
6	Suleman Chaheen Water Supply Scheme	430480 m E 2971045 m N	Suleman Chaheen Goth	1/11/2023
D	**Taluka Kandiaro Water Supply Schemes**			
7	Kandiaro Water Supply Scheme	422676 m E 2991486 m N	Bypass Road Muhalla	2/11/2023
E	**Taluka Naushahro Feroze Water Supply Schemes**			
8	Urban Water Supply Scheme Darya Khan Maree	429035 m E 2952322 m N	Darya Khan Maree Muhalla	4/11/2023
F	**Taluka Mehrabpur Drainage Scheme**			
9	Mehrabpur Urban Disposal	441299 m E 2997715 m N	Ward # 01 Mehrabpur	3/11/2023
10	Mughal Muhalla Zone-D Disposal	441734 mE 2996458 mN	Mughal Muhalla	3/11/2023
11	Pir Wasan Zone-E Disposal	443322 m E 2997093 m N	Shah Goth	3/11/2023
12	Halani Main Disposal Zone-A	432207 m E 2996021 m N	Halani Near Fatima road	3/11/2023
13	Syed Muhalla Zone-B (Halani) Disposal	431664 m E 2996253 m N	Halani Syed Muhalla	3/11/2023
14	Helepota Muhalla Zone-C (Halani) Disposal	432721 m E 2996006 m N	Halani Halepota Muhalla	3/11/2023

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
15	Saeed Khan Lakho Disposal	425151 m E 2984541 m N	Mungo Goth	3/11/2023
16	Mitho Solangi Disposal	413886 m E 2986413 m N	Mithi Khan Solangi Goth	3/11/2023
17	Saeen Dad Bhambhan Disposal	429893 m E 3001591 m N	Saeen Dad Bhamban Goth	3/11/2023
18	Hoat Khan Jalbani Disposal	434468 m E 2985288 m N	Hote Khan Jalbani Goth	3/11/2023
19	Lakha Road Disposal	434469.34 m E 2985288.38 m N	Allahyar Vighio Goth	3/11/2023
20	Baqar Khan Mari Disposal	433909 m E 2986806 m N	Baqar Khan Mari Goth	3/11/2023
G	**Taluka Moro Drainage Scheme**			
21	Urban Disposal Scheme Zone-A	400424 m E 2948756 m N	Korai Muhalla	5/11/2023
22	Urban Disposal Scheme Zone-B	399922 m E 2950280 m N	Moro City	5/11/2023
23	Urban Disposal Scheme Zone-C	400853 m E 2949068 m N	Dastagir Colony	5/11/2023
24	Thorha Disposal Scheme	397726 m E 2965569 m N	Khoohani Jatoi Paro Thorha	5/11/2023
25	Daris Disposal Scheme	400931 m E 2951707 m N	Rajput Muhalla	5/11/2023
26	Deparja Disposal-A	395230 m E 2963736 m N	Nawab Din Deparja Goth	5/11/2023
27	Deparja Disposal-B	394450 m E 2963841 m N	Nawab Din Deparja Goth	5/11/2023
28	Malak Disposal Scheme Zone-B	391793 m E 2962579 m N	Malak Goth	5/11/2023
29	Qamaruddin Chandio Disposal Scheme	392121 m E 2962528 m N	Malak Goth Moro	5/11/2023
30	New Jatoi Disposal Scheme	399156 m E 2963695 m N	Muhalla New Jatoi	5/11/2023
31	Malak Disposal Scheme Zone-A	391799.98 m E 2962569.46 m N	Malak Goth	5/11/2023
H	**Taluka Bhiria Drainage Scheme**			
32	Gher Gaju Disposal Scheme	421540 m E 2966823 m N	Gher Gaju Goth	1/11/2023
33	Machur Disposal Scheme	412041 m E 2973388 m N	Machur Colony	1/11/2023
34	Khahi Rahu Disposal-I	415228 m E 2972135 m N	Soomra Mohalla Khahi Rahu	1/11/2023

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
35	Yaqoob Tunio Disposal Scheme	420114 m E 2968690 m N	Madina Street Goth	1/11/2023
36	Darya Khan Jalbani Disposal Scheme	297521.07 m E 4217890.42 m N	Goth Darya Khan	1/11/2023
37	Malhar Khan Rajper Disposal Scheme	424180 m E 2965355 m N	Malhar Rajper Goth	1/11/2023
38	Khahi Rahu Disposal Scheme	414988 m E 2972285 m N	Khahi Rahu Goth	1/11/2023
39	Dalipota Disposal Scheme	404319 m E 2977273 m N	Mehdiabad	1/11/2023
40	Hussain Kalhoro Disposal Scheme	4167080 m E 2982442 m N	Hussain Kalhoro Goth	1/11/2023
41	Suleman Chaheen Disposal Scheme	430408 m E 2971306 m N	Suleman Chaheen Goth	1/11/2023
I	**Taluka Kandiaro Drainage Scheme**			
42	Dabhro Drainage Scheme	413054 m E 2988080 m N	Darbelo Muhalla	2/11/2023
43	Ahmed Depar Drainage Scheme	419605 m E 2991019 m N	Ahmed Depar Goth	2/11/2023
44	Muahmmad Khan Agro Drainage Scheme	423655.31m E 3004355.47m N	Mohabat Dero Goth	2/11/2023
45	Bhority Drainage Scheme	404662 m E 2983368 m N	Mehro Mastoi Bhority Goth	2/11/2023
46	Darbellow Main Disposal Zone-A	413054 m E 2988080 m N	Darbello Goth	2/11/2023
47	Darbellow Rajput Muhalla Zone-B	413546 m E 2988734 m N	Darbello Goth	2/11/2023
48	Manjuth Drainage Scheme	408402 m E 2985528 m N	New Manjuth Goth	2/11/2023
49	Molay Dino Larik Drainage Scheme	415031 m E 2985368 m N	Moulendino Larik Goth	2/11/2023
50	Hamid Ujjan Drainage Scheme	422163.31 m E 2994508.52 m N	Goth Hamid Ujjan	2/11/2023
51	Koro Khan Khushik Drainage Scheme	424825 m E 3007153 m N	Goth Rais Shahnawaz Khan Khushk	2/11/2023
52	Sabab Abro Drainage Scheme	411080 m E 2988472 m N	Goth Sbabd Abro	2/11/2023
53	Kandiaro Disposal Zone - A	422062 m E 2993115 m N	Kandiaro	2/11/2023
54	Kandiaro Urban Disposal Pir Zada Zone-G	421243 m E 2993352 m N	Pir Zada Colony	2/11/2023
55	Kandiaro Zone-F Tharu shah Naka Disposal	421443.56 m E	Baban shah Chowk Muhalla	2/11/2023

No.	Schemes	Coordinates	Name of the Goth/Community	Date of Consultation
		2993149.55 m N		
56	Muhbat Dero Jatoi Drainage Scheme	423757.03 m E 3002409.06 m N	Goth Ali Wahan	2/11/2023
57	Achi Maseet and Koro Ujjan Drainage Scheme	414477 m E 2983804 m N	Goth Achi Masjid	2/11/2023
58	Bazeedpur Drainage Scheme	426066.32 m E 2987019.67 m N	Goth Bazeedpur	2/11/2023
59	Khan Wahan Zone-A Disposal	430546 m E 3006357 m N	Khan Wahan	2/11/2023
60	Khan Wahan Zone-B Lochi Muhalla Disposal	429892 m E 3006565 m N	Lochi Muhalla	2/11/2023
61	Khan Wahan Zone-C Qundhar Muhalla Disposal	430076 m E 3005987 m N	Qandhar Muhalla	2/11/2023
62	Soomar Channar Drainage Scheme	414782 m E 2991525 m N	Goth Abad Soomar Chanar	2/11/2023
J	**Taluka Naushahro Feroze Drainage Schemes**			
63	Urban Drainage Scheme (Talib Solangi) Naushahro Feroze	413424 m E 2969477 m N	Qaim Colony	4/11/2023
64	Sindh Colony Disposal	412429 m E 2968708 m N	Pir Muhalla	4/11/2023
65	Public Health Disposal	413353 m E 2969500 m N	Qaim Colony	4/11/2023
66	Seral Disposal	413393 m E 2968653 m N	Amir Taj Colony Ward no. 4	4/11/2023
67	Mehran Colony Disposal	411293 m E 2969032 m N	Mehran Colony	4/11/2023
68	Hifza Colony Disposal	413179 m E 2970583 m N	Hifza Colony	4/11/2023
69	Darya Khan Maree (Sochi Muhalla Disposal)	429322 m E 2950957 m N	Suchi Muhalla	4/11/2023
70	Darya Khan Maree (Murad Shah) Disposal	428670 m E 2950794 m N	Murad Shah Colony	4/11/2023
71	Darya Khan Maree (Maree Muhallah) Disposal	428887 m E 2950465 m N	Mari Muhalla	4/11/2023
72	Khair Muhammad Bohio Drainage Scheme	407068 m E 2971287 m N	Goth Shambo Panhwar	4/11/2023
73	Cheho Drainage Scheme	426433 m E 2962433 m N	Cheeho Goth	4/11/2023
74	Abran Drainage Scheme	402935 m E 2967615 m N	Himmat Ali Shaikh Goth	4/11/2023

3.1 Community Concerns

Comments /Observations	Action /Response
Questions regarding concerns and issues encountered during the monsoon season or following floods were asked by the community members.	They notified the team that the area is experiencing severe load shedding, which is a primary factor in the present water supply and drainage system's collapse. During the monsoon, most of the area is covered with stagnant water, fowl smells and the water turns quite murky and might induce stomach problems. There are rising mains concerns that need to be fixed, pumps that are broken or not functioning properly, and regular drain cleaning. Although solar panels are erected, but due to no maintenance it got dysfunctional. Community also highlighted that at most of the drainage schemes, there is no drainage lines available. Wastewater from pumping station disposed in nearby open grounds causes spreading of diseases.
Community raised point regarding basic need of the pump operators at water supply and drainage scheme i.e., to provide toilet and room facility where it is not available or in bad condition.	Site team od CSC ensured that it is already in the scope and noted during initial assessments. However, this will be provided or rehabilitated as per approved BOQ during execution phase.
Community expressed their concern regarding the sustainability and long-term upkeep of the drainage and water delivery systems.	The community was informed that the Department will guarantee operation and maintenance plans, that PHED is in charge of the project, and that any steps made to guarantee the infrastructure's long-term survival will be reported. Operational staff recruited by the GoS is present in every scheme undergoing rehabilitation.
Concerns over the overall effects of drainage and water supply plans on public health and sanitation were expressed by community members.	The community was informed of the advantages to their health that come with having better access to clean water, and efficient drainage systems. The community's specific health problems will be handled appropriately by installation of Hypo-chlorinator, and steps taken to guarantee public safety will be outlined.
Discussion regarding the importance and usefulness of rehabilitation of water supplies and drainage schemes was held.	The proposed water supply and drainage schemes will improve the socioeconomic status of the area by rehabilitating drainage schemes and offer clean drinking water, according to the approved scope of work.

Comments /Observations	Action /Response
Stakeholders/ Local Community members asked about the operations and maintenance of Water Supply & Drainage Schemes.	The team responded that safe drinking water will be provided to the community without any interruption and Public health Engineering Department (PHED) will be responsible for operations and maintenance.
Local Community inquired about the project execution and its completion.	In response, the technical team stated that the project will start in June 2024 and be finished in June 2025. The proposed project area's current facilities will be the only ones undergoing repair, and it will be finished in a year.
The community urged to provide of semi-skilled and unskilled jobs for local labor.	Locals will be given preference for unskilled works during construction.
Typically, women in the sub-project area retrieve water from pumping stations. Some residents expressed concern that the privacy of the surrounding communities might not be violated, particularly in cases when the villages are close to or adjacent to pumping stations.	It was clarified that local labor would be employed to complete the project, and all staff members would be subject to limitations in order to protect people's privacy and local customs. There would be no labor interaction with women or children. And if community continue to have problems, they can contact SFERP GRC via email or at the toll-free number displayed at each scheme with project information board.
Concerns from the community were also expressed over the possibility of noise, dust, traffic jams, and brief service outages resulting from construction projects related to drainage and water supply.	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.
The community asked for a comprehensive needs assessment to be conducted in order to pinpoint the shortcomings and challenges in drainage and water supply plans, as well as to address other concerns including the availability of health and education facilities, simple access to water supplies, and, if feasible, metaled access routes.	The community was informed that the proposed subproject will be carried out following a thorough needs assessment and an evaluation of the flood damage. Additionally, it was disclosed that budget will be available for the restoration of drainage and water infrastructure, but the construction contractor would be urged to take appropriate steps to fulfill their corporate social duty.

Himmat Ali Shaikh Goth, Taluka District Naushahro Feroz

Mehro Mastoi Goth, Taluka Kandiaro, District Naushahro Feroz

Malhar Khan Rajper Goth, Taluka Bhiriya Naushahro Feroz

Khoohani Jatoi Paro Thorha, Taluka Moro, District Naushahro Feroz

Halani, Taluka Mehrabpur, District Naushahro Feroz

Allahyar Vighio Goth, Taluka Mehrabpur, District Naushahro Feroz

Figure 3: Stakeholders Consultation

3.2 Institutional Consultation

The Environment and Social team conducted consultations with concerned Government Department in November, 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 participants involved had favorable opinions on the restoration of drainage and water supply systems.	The participants were largely in support of the project and agreed that it is desperately needed given the situation of the water supply and drainage schemes after the devastating floods of 2022.
Detailed discussions were held regarding the environmental and social issues of the area due to proposed rehabilitation activity.	The inhabitants, local flora, and fauna won't be negatively impacted by the project. The project is located on land owned by the government, and during the project's constructing phase, no significant social or environmental problems are anticipated. To counteract environmental deterioration, mitigating strategies will be suggested.
According to the stakeholders, if the proposed project is executed appropriately and with an effective team, it will improve the socioeconomic status 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 biodiversity of the area during the construction phase and construction waste should not be disposed-off in nearby surroundings.	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

Comments/Observations	Actions/ Responses
	sites, trees will be cut or chopped and 1:10 trees will be planted in compensation and the Line Department would be responsible for caring the newly planted trees after construction phase. CSC team ensured that Construction debris would be disposed only at TMA lands and other materials will be handed over to SEPA certified waste contractors.
The Stakeholder shows their concern regarding the impacts during the construction stage on waste management and land acquisition	CSC team briefed that all type of waste would be handled properly as stated by SEPA through TMA approved lands and certified waste contractors. 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 take care of local customs and traditions during construction.	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. Privacies would be ensured. It was also assured that norms, ethics and traditions of community will not be disturbed.
	
	

Figure 4: 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 in agriculture lands.		

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
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 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	Weekly during Construction Phase	**Construction phase** Contractor **Operational phase** PHED

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
			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
9.	**Safety Hazards**	**Construction Phase** Project related vehicular traffic Driving Injuries related with civil works and electrical works Heat Waves Cold Waves Communicable Diseases	- 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	Daily during Construction and operation phase	**Construction phase** Contractor **Operational phase** PHED

Sr. No.	Activity	Potential Impacts	Mitigation Measures	Monitoring & Reporting Frequency	Responsibility
			gate in both national and local language.		
		Operation Phase Injuries during Operational phase	- 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 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.		

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

5 PICTORIAL PROFILE OF PROJECT SITES

5.1 Chaheen Manumal Drainage Scheme, Taluka Bhiria, District Naushahro Feroze

5.2 Dalipota Drainage scheme, Taluka Bhiria, District Naushahro Feroz

5.3 Malhar Khan Rajper Drainage Scheme, Taluka Bhiria, District Naushahro Feroz

5.4 Urban Water Supply Scheme Kandiaro, Taluka Kandiaro, District Naushahro Feroz

5.5 Lakh Mir Brohi Water Supply Scheme, Taluka and District Naushahro Feroz

6 ENVIRONMENTAL AND SOCIAL IMPLEMENTATION BUDGET

There are total 74 schemes in District Naushahro Feroz in which 08 are Drainage Schemes and 66 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 at 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 located in Government owned land and there will be no resettlement or land acquisition issues 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	66	66	1,122,000
2	Drinking Water	One Sample from each water supply scheme		15,000	1	8	8	120,000
3	Ambient Air	1 Sample from each subproject scheme		15,000	1	74	74	1,110,000
4	Ambient Noise	1 Sample from each subproject scheme		1,000	1	74	74	74,000
							Sub Total - A	**2,426,000**
B. Environmental Analysis Cost at Completion Phase (12 months)								
1	Drinking Water	One from camp area at each water supply scheme site	Once at the End of Construction	15,000	1	8	8	120,000
2	Wastewater	1 Sample from Each Drainage Scheme		17,000	1	66	66	1,122,000
3	Generators/Stack Emission (If available)	One Sample from construction site		10,000	1	74	74	740,000
4	Ambient Air	One from the camp area		15,000	1	74	74	1,110,000
5	Ambient Noise	One from the camp area		1,000	1	74	74	74,000
6	Mobilization Charges	At each water supply and drainage scheme		10,000	1	74	74	740,000
							Sub Total - B	**3,906,000**
C. EHS Management								
1	Personal Protective Equipment		Bi annual	6,000	1	25	25	150,000
2	Waste Disposal from Construction Sites						Lump sum	100,000
3	Project dissemination materials such as banners, flayers, notice board etc.			10000	1	74	74	740,000
							Sub Total - C	**990,000**

D. EHS Administrative Cost							
1	Training/Capacity Building (Environment, Social, Gender, & OHS)	50 persons	20,000	1	74	74	1,480,000
2	Social Expert (for social compliance & GRM implementation) Salary		120,000	12	1	12	1,440,000
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	12	1	12	1,440,000
						Sub Total - D	**4,860,000**
						TOTAL OF (A TO D)	**12,182,000**

*** 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.

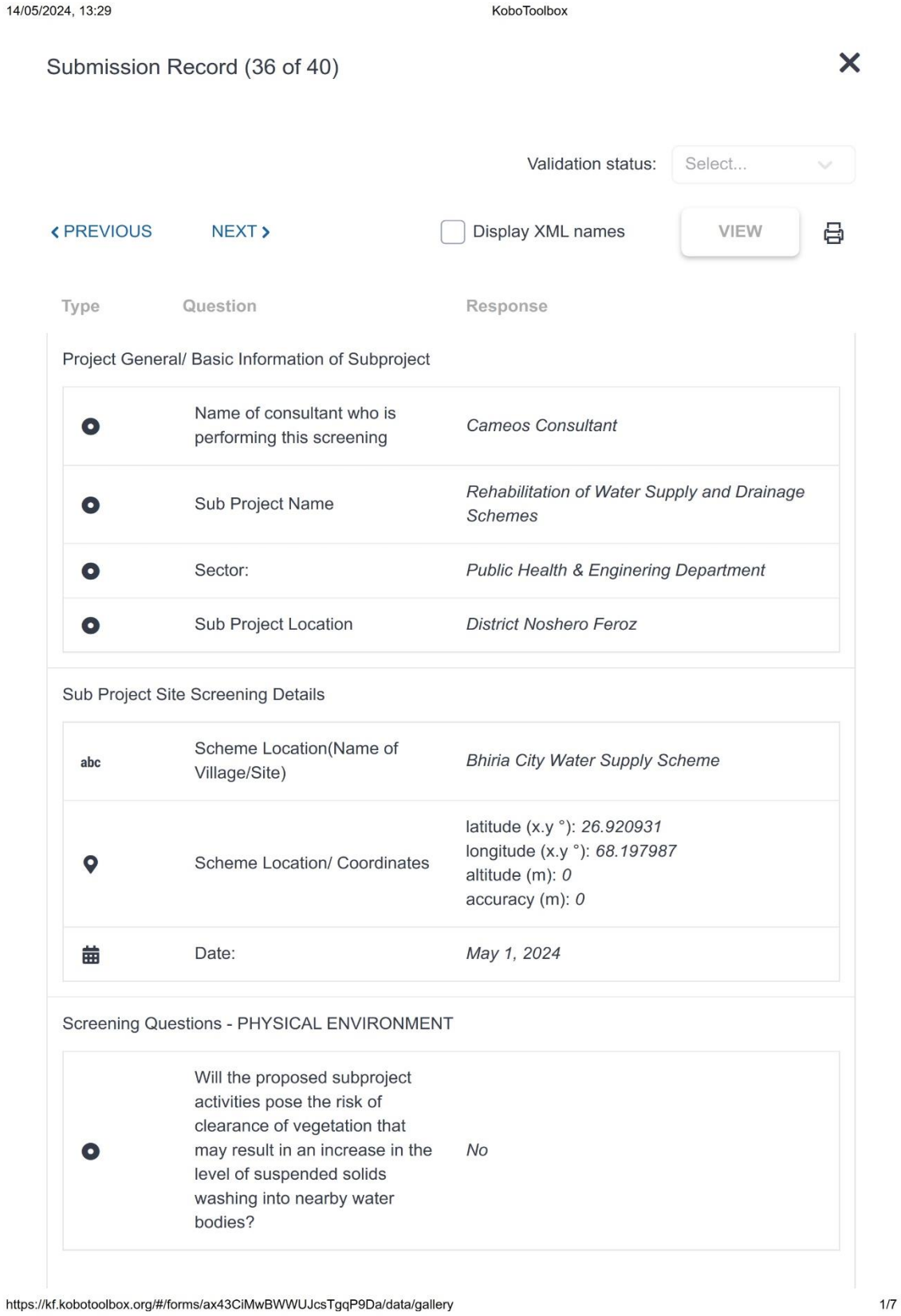
v. **Increased property values:** Communities with well-maintained WSS and drainage systems typically have higher property values.

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 Naushahro Feroz

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



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Submission Record (36 of 40)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Bhiria City Water Supply Scheme*
	Scheme Location/ Coordinates	latitude (x.y °): *26.920931* longitude (x.y °): *68.197987* altitude (m): *0* accuracy (m): *0*
	Date:	*May 1, 2024*
Screening Questions - 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*

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abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*Yes*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*No*
abc	Remarks	*Yes, stakeholders' consultations have been conducted to know the ground situation of the sub-project areas.*
⊙	Were vulnerable groups involved in stakeholder consultations? (e.g., women,	*Yes*

	minorities, economically disadvantaged individuals, etc.)	
abc	Remarks	*Yes, women requested to provide hassle free clean drinking water to reduce diseases especially during monsoon.*
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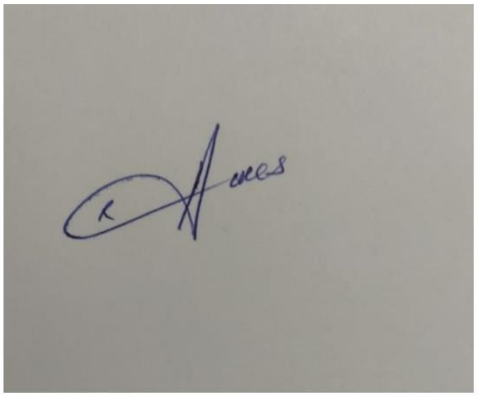
	Signature	
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Submitted by	

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Submission Record (15 of 41)

Validation status: Approved

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Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Gher Gaju Disposal Scheme*
	Scheme Location/ Coordinates	latitude (x.y °): *26.820724* longitude (x.y °): *68.210457* altitude (m): *0* accuracy (m): *0*
	Date:	*May 2, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*The Stakeholder shows their concern regarding the impacts during the construction stage on solid waste management and traffic congestion. They also highlighted that PHE staff doesn't have enough funds or manpower to maintain existing structure.*

◉	Were vulnerable groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, there is no attention to the cleanliness and drainage network of the area.*
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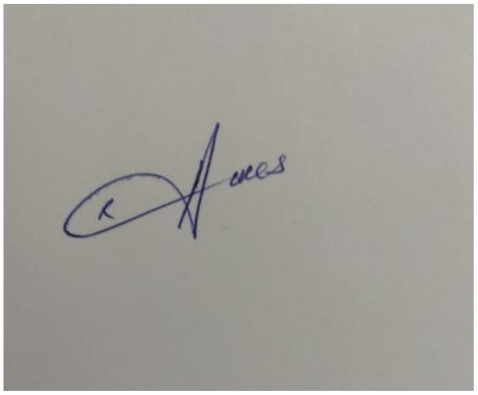
🖼	Signature	
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Submitted by	

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Submission Record (20 of 41)

Validation status: Approved

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Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Hoat Khan Jalbani Disposal*
	Scheme Location/ Coordinates	latitude (x.y °): *26.988095* longitude (x.y °): *68.339574* altitude (m): *0* accuracy (m): *0*
	Date:	*May 2, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*The Stakeholder shows their concern regarding the impacts during the construction stage on solid waste management and traffic congestion. They also highlighted that PHE staff doesn't have enough funds or manpower to maintain existing structure.*

◉	Were vulnerable groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, there is no attention to the cleanliness and drainage network of the area.*
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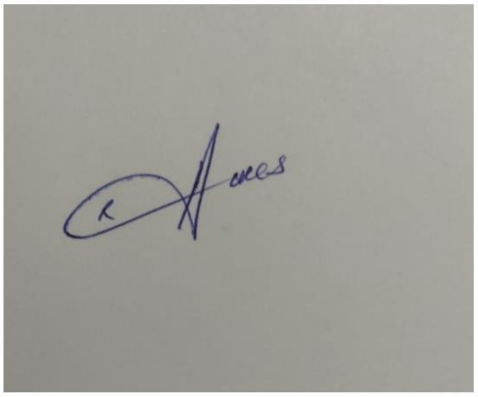
🖼	Signature	
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Submitted by	

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Submission Record (34 of 40)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Kandiaro Water Supply Scheme*
	Scheme Location/ Coordinates	latitude (x.y °): *27.043441* longitude (x.y °): *68.220358* altitude (m): *0* accuracy (m): *0*
	Date:	*May 1, 2024*
Screening Questions - 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?	

abc	Remarks
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?
abc	Remarks
◉	Is there any potential pollution source in water supply network?
abc	Remarks
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?
abc	Remarks
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?
abc	Remarks
◉	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?
abc	Remarks
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?

abc	Remarks
◉	Will these ambient noise levels be beyond the specifications in the SEQS?
abc	Remarks
◉	Will the proposed subproject activities lead to increased soil erosion?
abc	Remarks
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?
abc	Remarks
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?
abc	Remarks
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)
abc	Remarks

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*Yes*
abc	Remarks	*Rohri Canal is flowing adjacent to sup-project site.*
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	

abc	Remarks	
◉	Will local labor be used for the proposed subproject construction activities?	
abc	Remarks	
◉	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	
abc	Remarks	
◉	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	
abc	Remarks	
◉	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	
abc	Remarks	
◉	Have there been any past security-related issues at the proposed subproject sites?	
abc	Remarks	
◉	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*Yes, they were engaged and concerned about community Health and Safety due to construction.*
	Were vulnerable groups involved in stakeholder	

◉	consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, females were happy that sufficient and clean supply of water will be available to the subproject area.*
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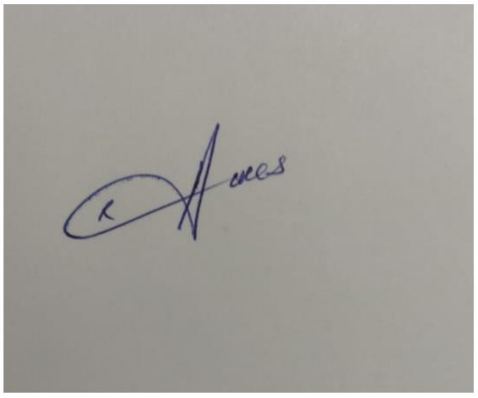
🖼	Signature	
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Submitted by	

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Submission Record (1 of 42)

Validation status: Select...

NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Khahi Rahu Disposal Scheme*
	Scheme Location/ Coordinates	latitude (x.y °): *26.868311* longitude (x.y °): *68.146585* altitude (m): *0* accuracy (m): *0*
	Date:	*May 4, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*The Stakeholder shows their concern regarding the impacts during the construction stage on solid waste management and traffic congestion. They also highlighted that PHE staff doesn't have enough funds or manpower to maintain existing structure.*

◉	Were vulnerable groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, there is no attention to the cleanliness and drainage network of the area.*
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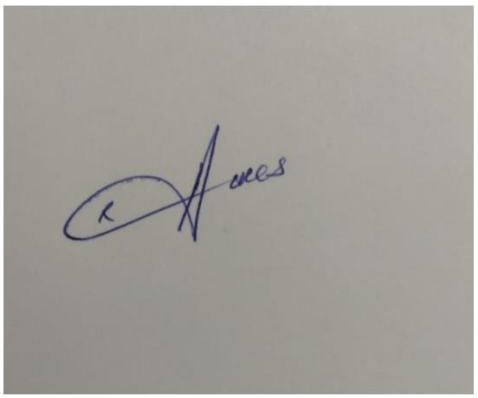
🖼	Signature	
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	Submitted by	

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Submission Record (38 of 40)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Khamiso Khan Dahri Water Supply Scheme*
	Scheme Location/ Coordinates	latitude (x.y °): *26.559994* longitude (x.y °): *68.09549* altitude (m): *0* accuracy (m): *0*
	Date:	*May 1, 2024*
Screening Questions - 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*

abc	Remarks	*No vegetation clearance will be done 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?	*No*
abc	Remarks	*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*
abc	Remarks	*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*
abc	Remarks	*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?	*Yes*
abc	Remarks	*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	*Yes*

	the construction and operation of related machinery?	
abc	Remarks	*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?	*Yes*
abc	Remarks	*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*
abc	Remarks	*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?	*No*
abc	Remarks	*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?	*Yes*
abc	Remarks	*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)?	*No*
abc	Remarks	*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.)	*No*
abc	Remarks	*The Subproject area does not come under the category of high hazard risk.*

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*
abc	Remarks	*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?	*No*
abc	Remarks	*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*
abc	Remarks	*No, there are no protected areas situated in nearby surroundings.*
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*

abc	Remarks	*Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.*

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	*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?	*No*
abc	Remarks	*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*
abc	Remarks	*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*
abc	Remarks	*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?	*No*
abc	Remarks	*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?	*Yes*
abc	Remarks	*Minor impacts only during construction.*
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	*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*
abc	Remarks	*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*
abc	Remarks	*Yes, they were engaged and concerned about community Health and Safety due to construction.*
⊙	Were vulnerable groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, females were happy that sufficient and clean supply of water will be available to the subproject area.*

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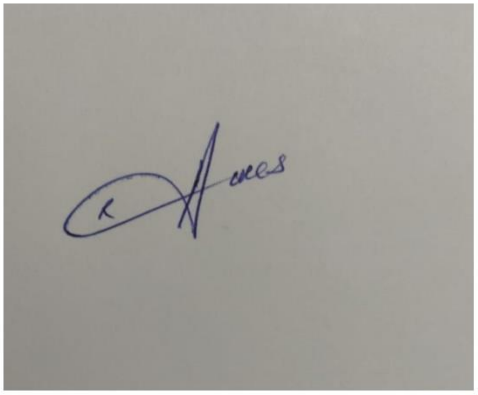
	Signature	
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	Submitted by	

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Submission Record (32 of 40)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Mehrabpur Urban Disposal*
	Scheme Location/ Coordinates	latitude (x.y °): *27.100592* longitude (x.y °): *68.407825* altitude (m): *0* accuracy (m): *0*
	Date:	*May 1, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*Yes*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*Yes, 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,	*Yes*

	minorities, economically disadvantaged individuals, etc.)	
abc	Remarks	*Yes, women requested to pay attention to the literacy rate and education system of children especially girls.*
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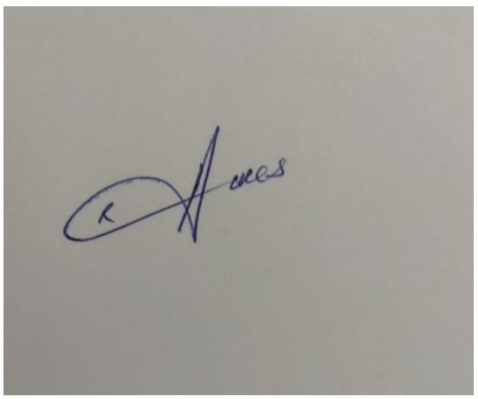
	Signature	
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Submitted by	

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Submission Record (10 of 42)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Sindh Colony Disposal*
	Scheme Location/ Coordinates	latitude (x.y °): *26.837201* longitude (x.y °): *68.118649* altitude (m): *0* accuracy (m): *0*
	Date:	*May 3, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*The Stakeholder shows their concern regarding the impacts during the construction stage on solid waste management and traffic congestion. They also highlighted that PHE staff doesn't have enough funds or manpower to maintain existing structure.*

◉	Were vulnerable groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, there is no attention to the cleanliness and drainage network of the area.*
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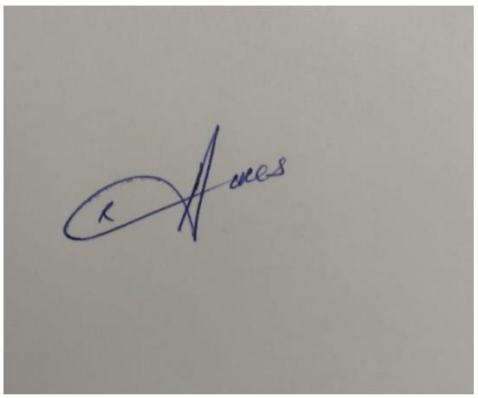
🖼	Signature	
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	Submitted by	

Submission Record (39 of 40)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Sobho Chang Water Supply Scheme*
	Scheme Location/ Coordinates	latitude (x.y °): *27.0735* longitude (x.y °): *68.31484* altitude (m): *0* accuracy (m): *0*
	Date:	*May 1, 2024*
Screening Questions - 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*

abc	Remarks	*No such activity will be taken place that cause clearance of vegetation.*
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*Yes*
abc	Remarks	*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*
abc	Remarks	*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*
abc	Remarks	*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?	*No*
abc	Remarks	*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?	*Yes*

abc	Remarks	*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?	*Yes*
abc	Remarks	*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*
abc	Remarks	*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?	*No*
abc	Remarks	*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?	*Yes*
abc	Remarks	*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)?	*No*
abc	Remarks	*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.)	*No*
abc	Remarks	*The Subproject area does not come under the category of high hazard risk.*

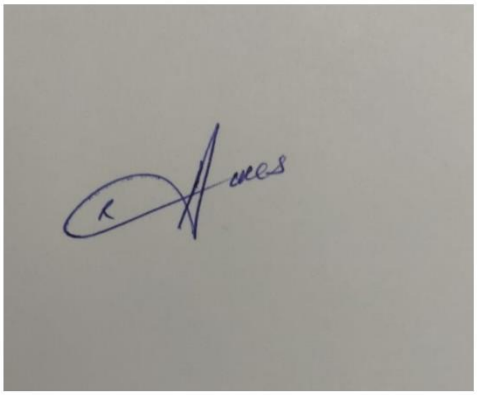
Screening Questions- ECOLOGICAL ENVIRONMENT

⊙	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*
abc	Remarks	*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?	*No*
abc	Remarks	*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*
abc	Remarks	*No, there are no protected areas situated in nearby surroundings.*
⊙	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	*Fauna of urban nature is found around subproject area that comes under the least concern status of the IUCN Red List.*

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	*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?	*No*
abc	Remarks	*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*
abc	Remarks	*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*
abc	Remarks	*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?	*No*
abc	Remarks	*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,	*Yes*

	particularly during the construction phase?	
abc	Remarks	*Minor impacts only during construction.*
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	*No such category is present in the subproject area.*
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	*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*
abc	Remarks	*Yes, stakeholders' consultations have been conducted to know the ground situation of the sub-project areas.*
⊙	Were vulnerable groups involved in stakeholder consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, women requested to provide hassle free clean drinking water to reduce diseases especially during monsoon.*
🖼	Site Photo	

	Signature	
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Submission Record (18 of 41)

Validation status: Approved

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Urban Disposal Scheme Zone-A*
	Scheme Location/ Coordinates	latitude (x.y °): *26.656279* longitude (x.y °): *67.999418* altitude (m): *0* accuracy (m): *0*
	Date:	*May 2, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

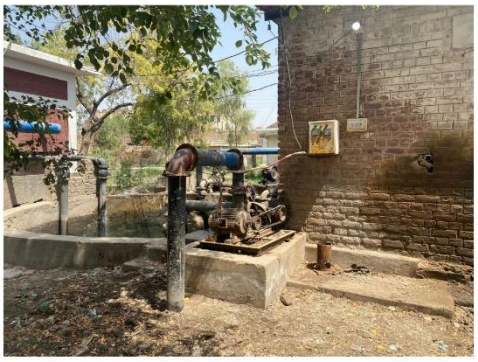
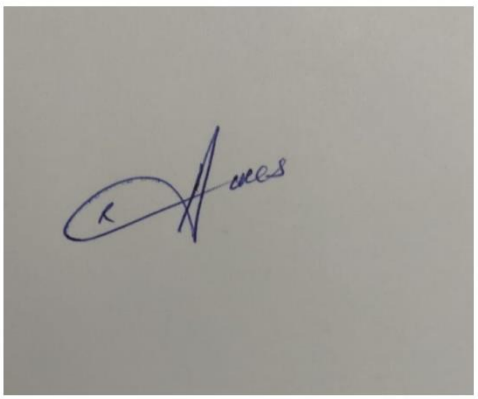
◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*Yes*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*Yes*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*Yes*
abc	Remarks	

⊙	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
⊙	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
⊙	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
⊙	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
⊙	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
⊙	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*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,	*Yes*

	minorities, economically disadvantaged individuals, etc.)	
abc	Remarks	*Yes, engaging local people during project activities and considering the women's privacy not be affected.*
	Site Photo	
	Signature	
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Submitted by	

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Submission Record (33 of 40)

Validation status: Select...

‹ PREVIOUS NEXT › Display XML names VIEW

Type	Question	Response
Project General/ Basic Information of Subproject		
	Name of consultant who is performing this screening	*Cameos Consultant*
	Sub Project Name	*Rehabilitation of Water Supply and Drainage Schemes*
	Sector:	*Public Health & Enginering Department*
	Sub Project Location	*District Noshero Feroz*
Sub Project Site Screening Details		
abc	Scheme Location(Name of Village/Site)	*Urban Water Supply Scheme Darya Khan Maree*
	Scheme Location/ Coordinates	latitude (x.y °): *27.043441* longitude (x.y °): *68.220358* altitude (m): *0* accuracy (m): *0*
	Date:	*May 1, 2024*
Screening Questions - 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*

abc	Remarks	
◉	Will the proposed subproject activities pose a risk of contaminating drinking water sources due to construction activities?	*No*
abc	Remarks	
◉	Is there any potential pollution source in water supply network?	*No*
abc	Remarks	
◉	Is there any potential source that can damage drainage network? Or Is it affected by flood?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions deplete groundwater because of the water used during rehabilitation activities?	*No*
abc	Remarks	
◉	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?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in an increase in ambient noise levels and vibrations due to the operation of construction machinery/vehicles?	*Yes*

abc	Remarks	
◉	Will these ambient noise levels be beyond the specifications in the SEQS?	*No*
abc	Remarks	
◉	Will the proposed subproject activities lead to increased soil erosion?	*No*
abc	Remarks	
◉	Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?	*Yes*
abc	Remarks	
◉	Will the proposed subproject interventions result in potentially increased health risks for subproject workers and communities (e.g., communicable diseases)?	*No*
abc	Remarks	
◉	Are the proposed subproject interventions being implemented in an area with high natural hazard risk? (e.g., floods, earthquakes, droughts, etc.)	*No*
abc	Remarks	

Screening Questions- ECOLOGICAL ENVIRONMENT

◉	Will the proposed subproject interventions potentially cause any adverse impacts on habitats, ecosystems, and/or ecosystem services?	*No*

abc	Remarks	
◉	Will any rehabilitation work be located in areas that would promote the conversion of natural habitats?	*No*
abc	Remarks	
◉	Will any proposed subproject interventions be located on or near sensitive environmental areas, including national parks and protected areas?	*Yes*
abc	Remarks	*A tributary of Rohri Canal is flowing at a distance of 269 m eastward.*
◉	Are the proposed subproject interventions activities likely to pose risks to any endangered species?	*No*
abc	Remarks	

Screening Questions- SOCIAL ENVIRONMENT

◉	Will the proposed subproject activities involve land acquisition?	*No*
abc	Remarks	
◉	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing this proposed subproject intervention?	*No*
abc	Remarks	
◉	Is labor influx (outside labor force) expected during the construction of the proposed subproject?	*No*

abc	Remarks	
◉	Will local labor be used for the proposed subproject construction activities?	*Yes*
abc	Remarks	
◉	Will there be any temporary or permanent displacement as a result of the proposed subproject construction or operation activities?	*No*
abc	Remarks	
◉	Are there expected to be any traffic-related issues as a result of the proposed subproject intervention activities, particularly during the construction phase?	*Yes*
abc	Remarks	
◉	Are the proposed subproject activities likely to have impacts on important religious/cultural heritage sites?	*No*
abc	Remarks	
◉	Have there been any past security-related issues at the proposed subproject sites?	*No*
abc	Remarks	
◉	Has stakeholder engagement taken place in the proposed subproject areas?	*Yes*
abc	Remarks	*Yes, they were engaged and concerned about community Health and Safety due to construction.*
	Were vulnerable groups involved in stakeholder	

◉	consultations? (e.g., women, minorities, economically disadvantaged individuals, etc.)	*Yes*
abc	Remarks	*Yes, females were happy that sufficient and clean supply of water will be available to the subproject area.*
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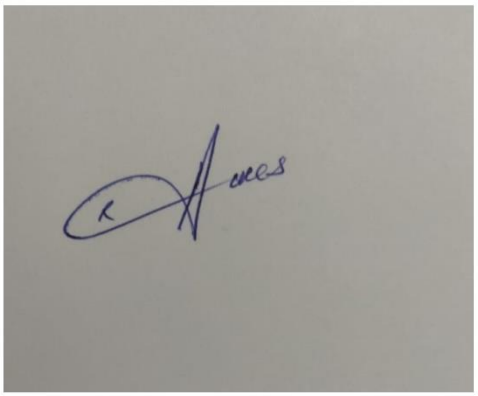
🖼	Signature	
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Submitted by	

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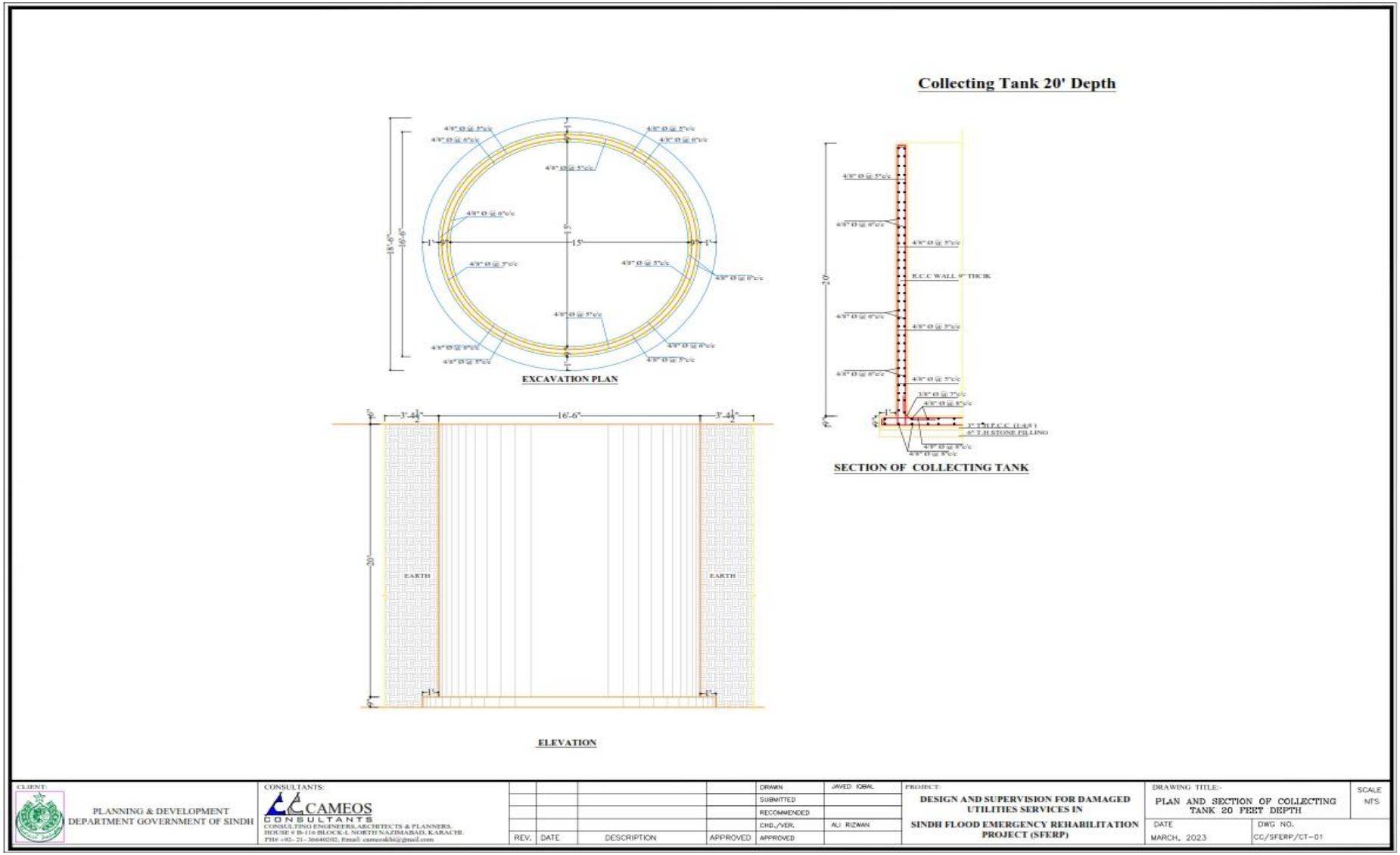
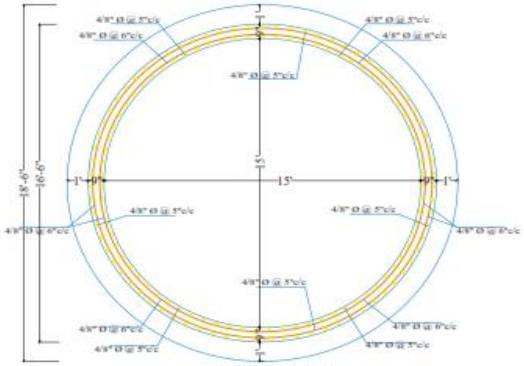
ANNEXURE 2:

Design Drawings of Water Supply Schemes & Drainage

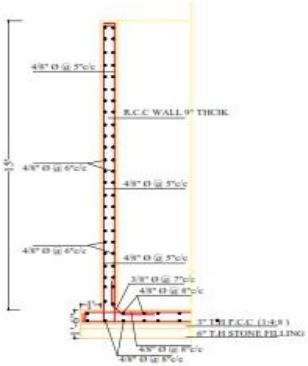
Annexure 2: Design Drawings of Water Supply Schemes & Drainage



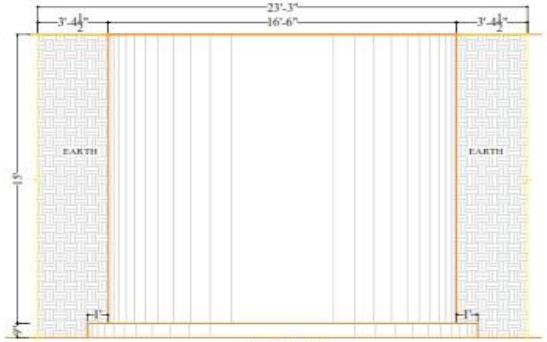
Collecting Tank 15' Depth



EXCAVATION PLAN



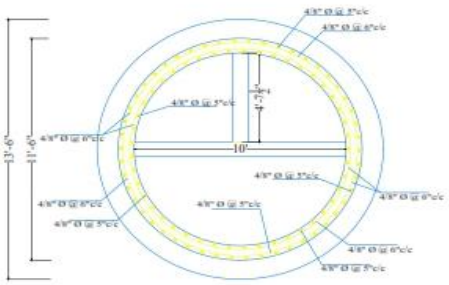
SECTION OF U.G.WATER TANK



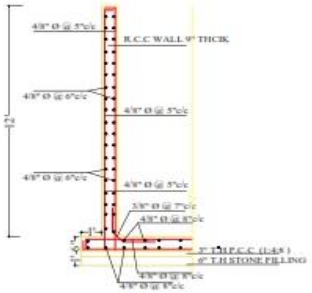
ELEVATION

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 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				

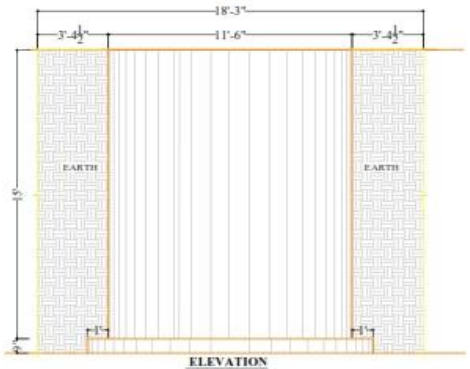
Collecting Tank 12' Depth



EXCAVATION PLAN



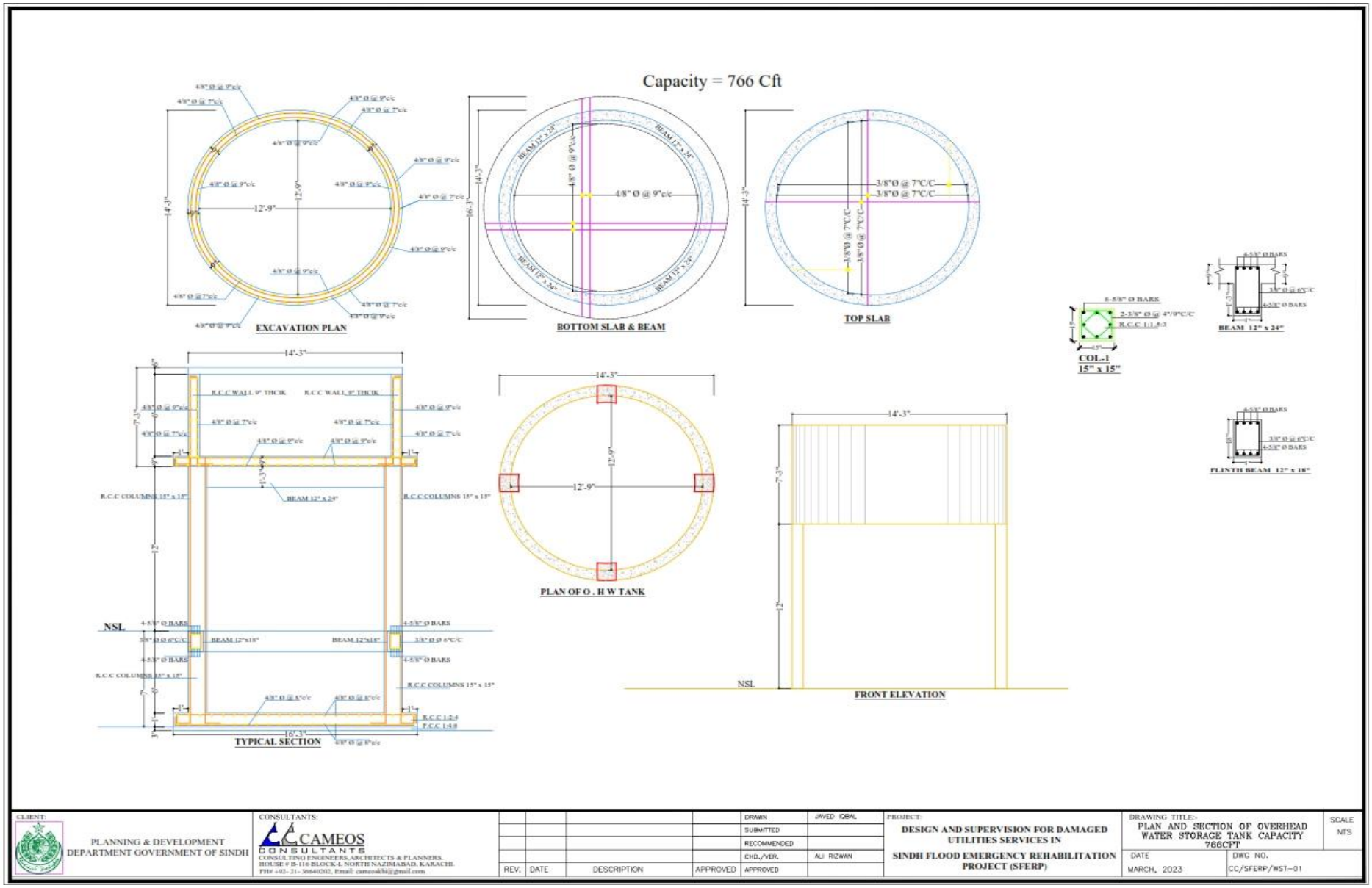
SECTION OF U.G.WATER TANK



ELEVATION

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; APPROVED	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; DATE: MARCH, 2023; DWG NO.: CC/SFERP/CT-03; SCALE: NTS

REV.	DATE	DESCRIPTION	APPROVED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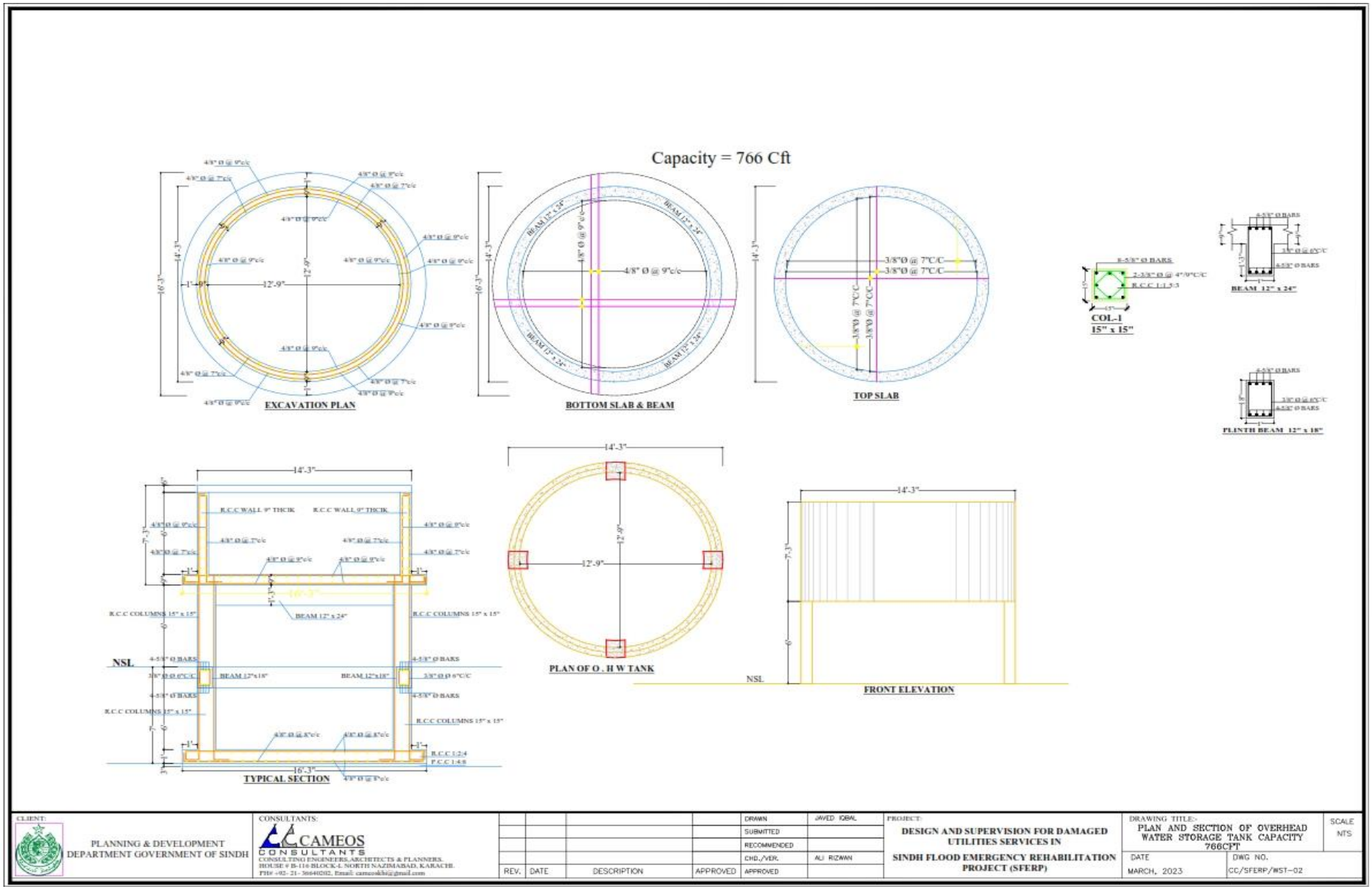
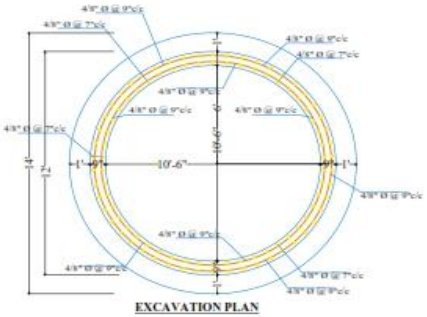
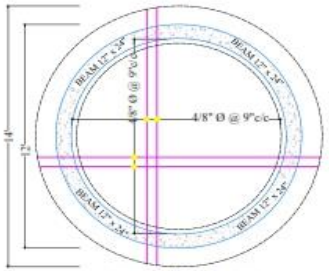
EXCAVATION PLAN
BOTTOM SLAB & BEAM
TOP SLAB
COL.-1
15" x 15"
BEAM 12" x 24"
PLINTH BEAM 12" x 18"
PLAN OF O . H W TANK
FRONT ELEVATION
TYPICAL SECTION
NSL
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS
CAMEOS
CONSULTANTS
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 766CFT
MARCH, 2023
CC/SFERP/WST-01
SCALE NTS


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
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/WST-02
DRAWN JAVED IQBAL
SUBMITTED
RECOMMENDED
CHD./VER. ALI RIZWAN
APPROVED
REV. DATE DESCRIPTION APPROVED

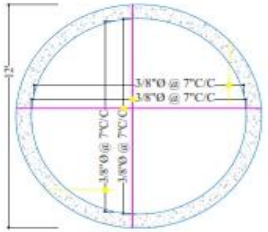
Capacity = 520 Cft



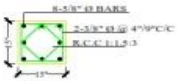
EXCAVATION PLAN



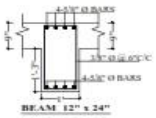
BOTTOM SLAB & BEAM



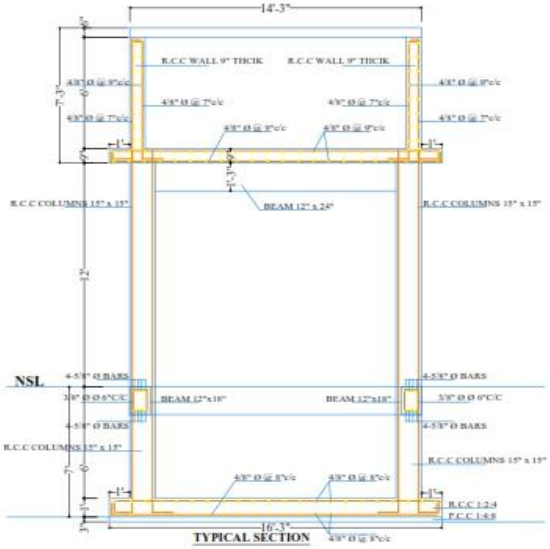
TOP SLAB



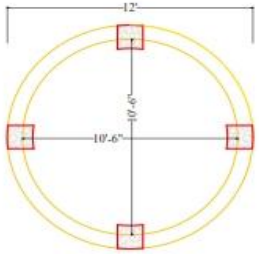
COL-1
15" x 15"



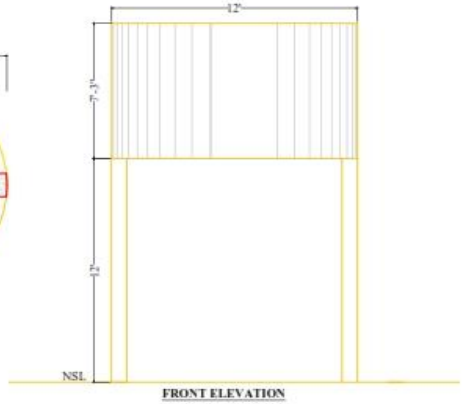
BEAM 12" x 24"



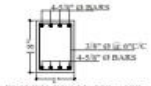
TYPICAL SECTION



PLAN OF O . H W TANK



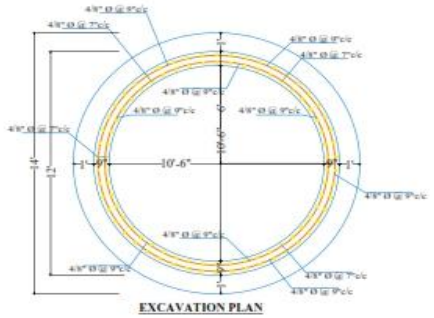
FRONT ELEVATION

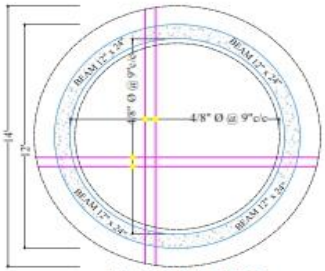


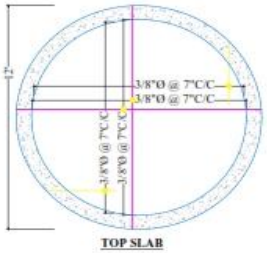
PLINTH BEAM 12" x 18"

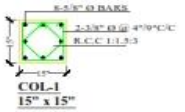
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS, CONSULTING ENGINEERS, ARCHITECTS & PLANNERS, HOUSE # B-116 BLOCK-4, NORTH NAZIMABAD, KARACHI. PH# +92- 21- 36640202, Email: cameoskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED 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-03
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

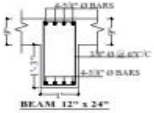
Capacity = 520 Cft

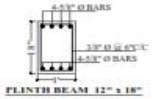


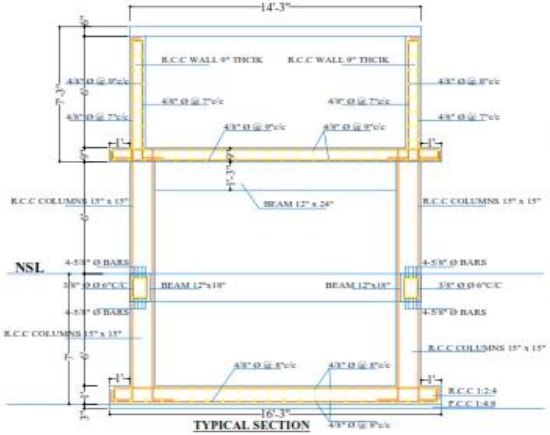


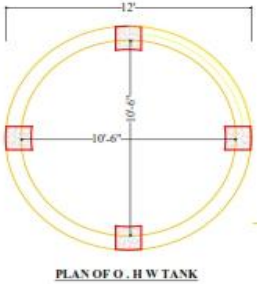


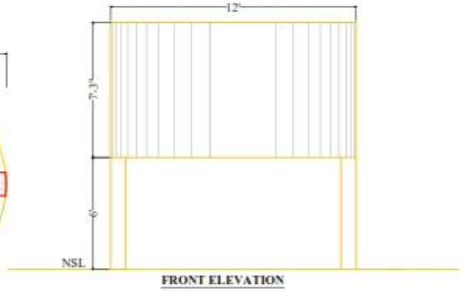






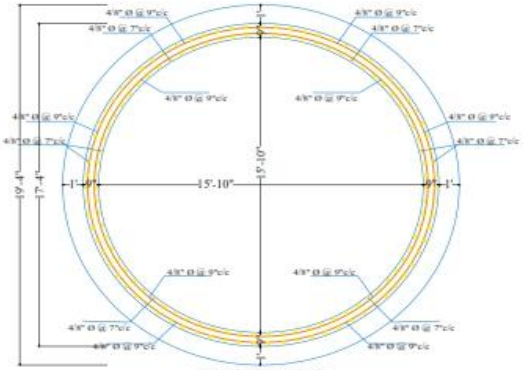




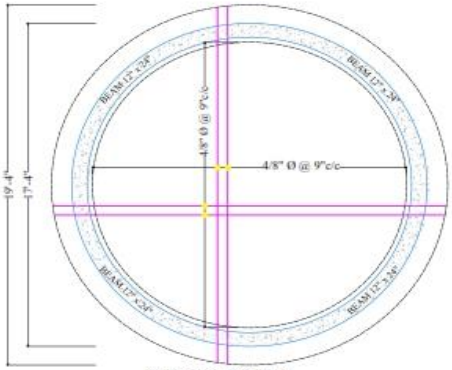


CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS, CONSULTING ENGINEERS, ARCHITECTS & PLANNERS, HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92- 21- 36640202, Email: cameoskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED 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			

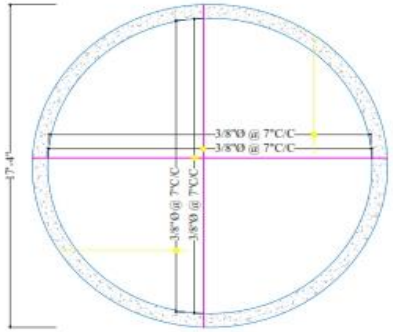
Capacity = 1180 Cft



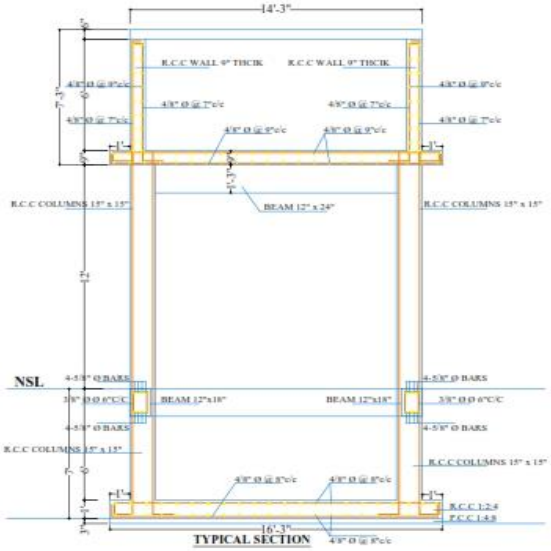
EXCAVATION PLAN



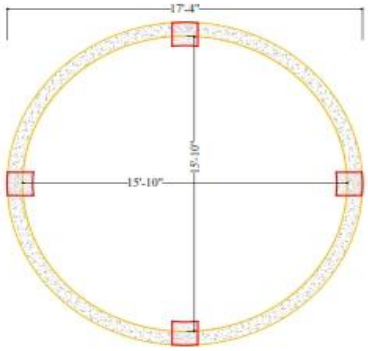
BOTTOM SLAB & BEAM



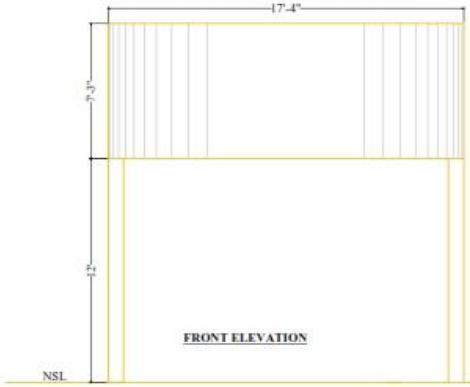
TOP SLAB



TYPICAL SECTION

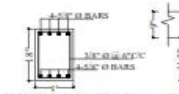


PLAN OF O . H W TANK

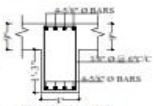


FRONT ELEVATION

COL-1
15" x 15"

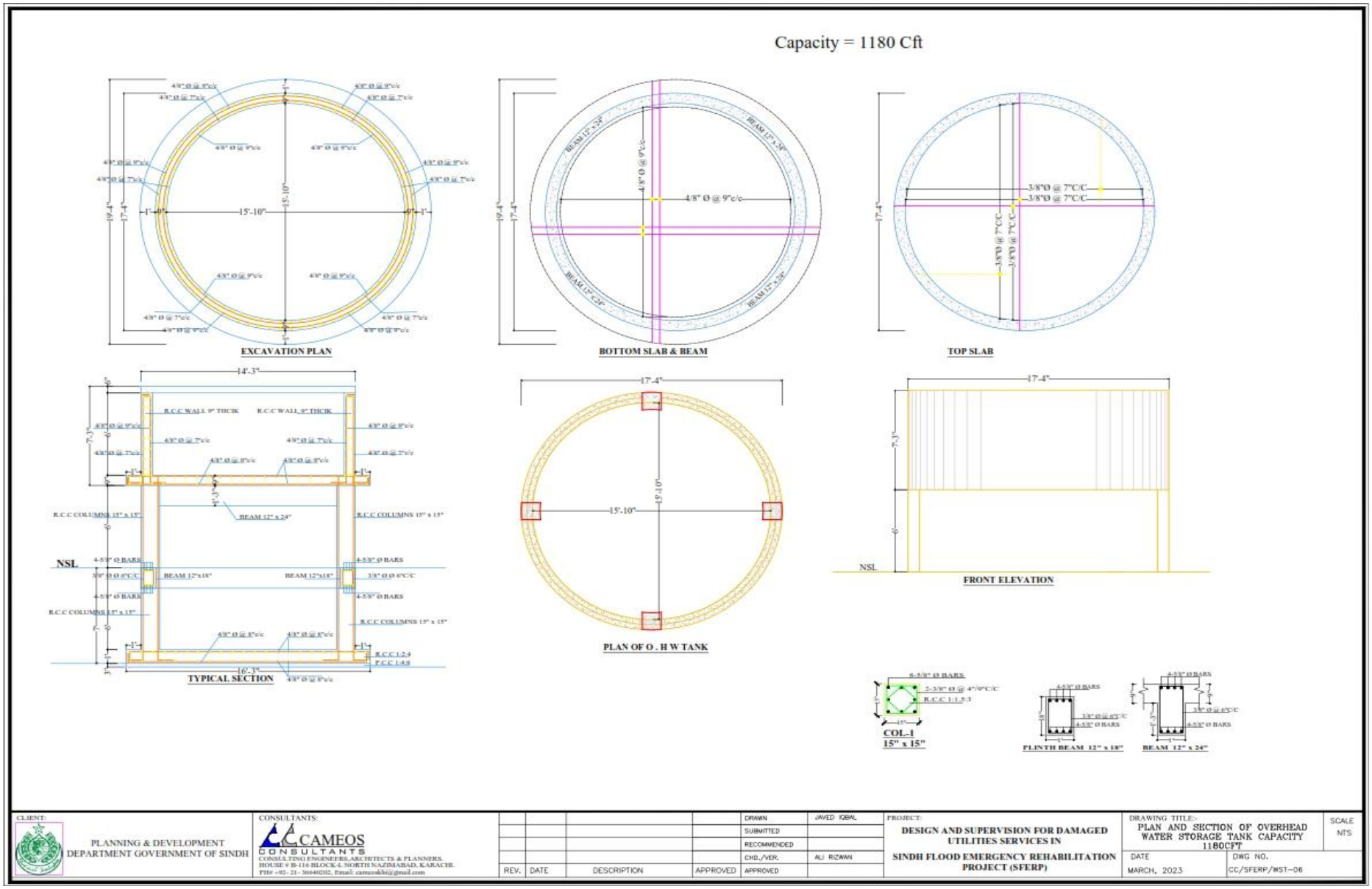


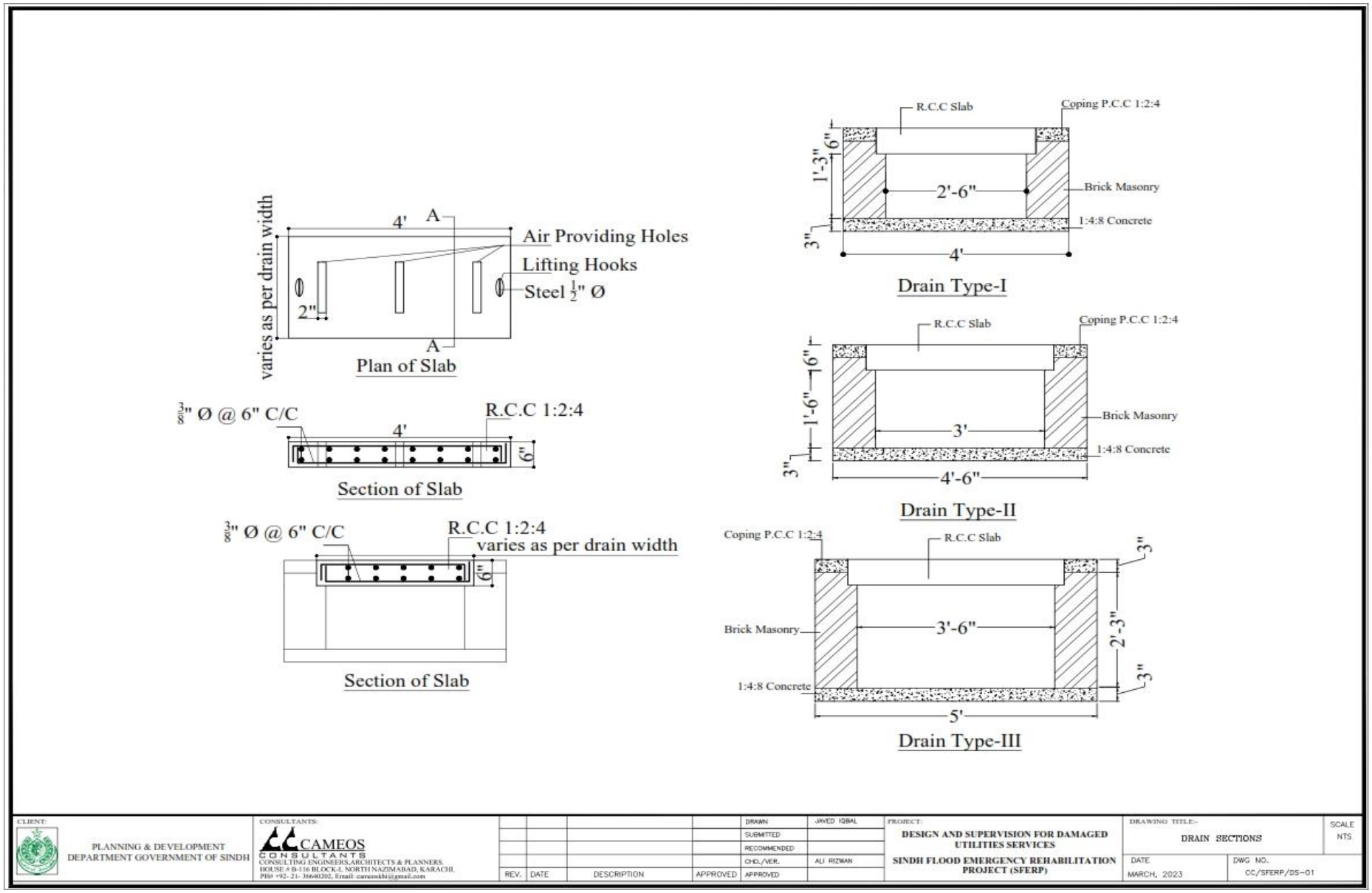
PLINTH BEAM 12" x 18"

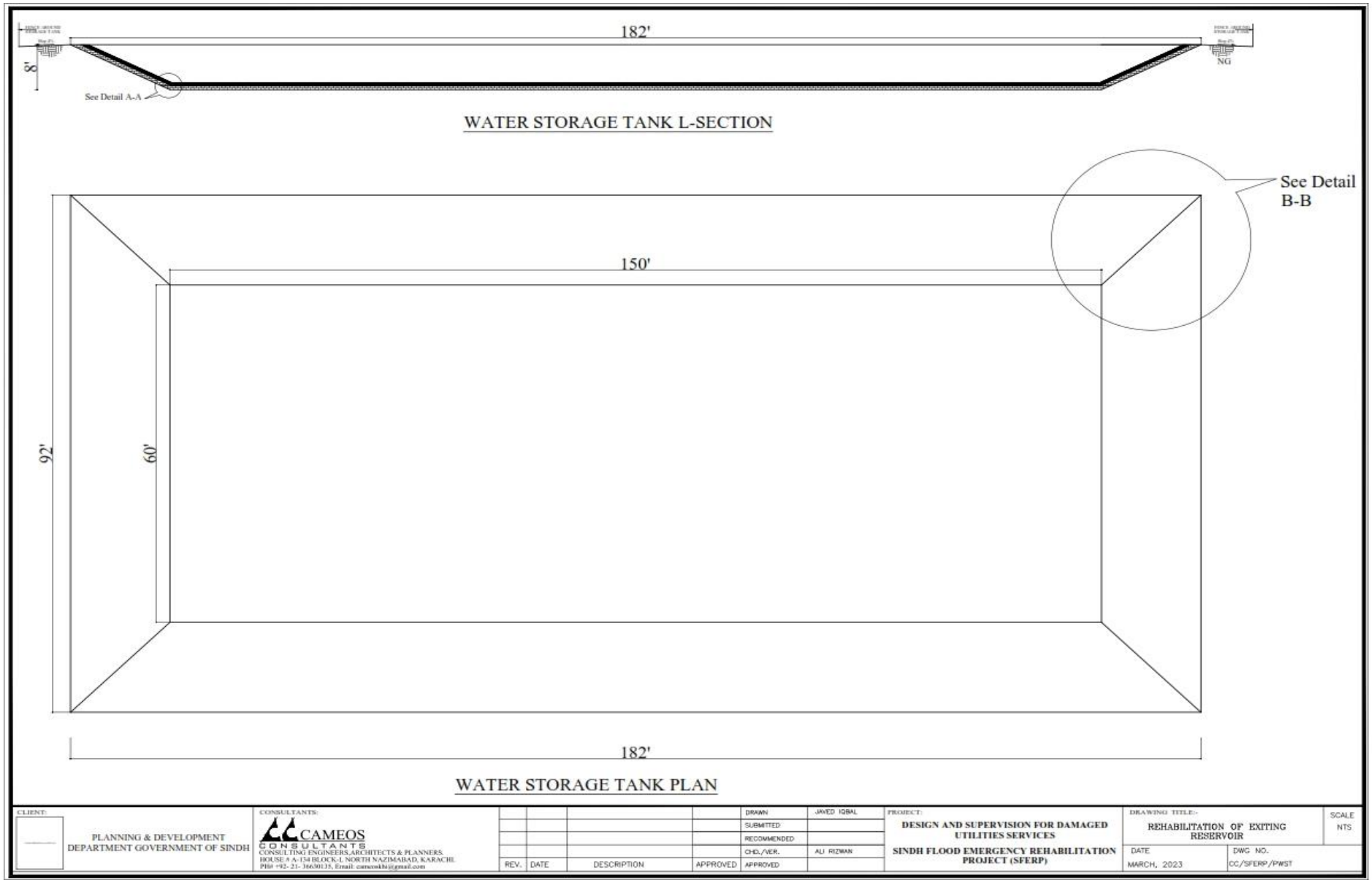


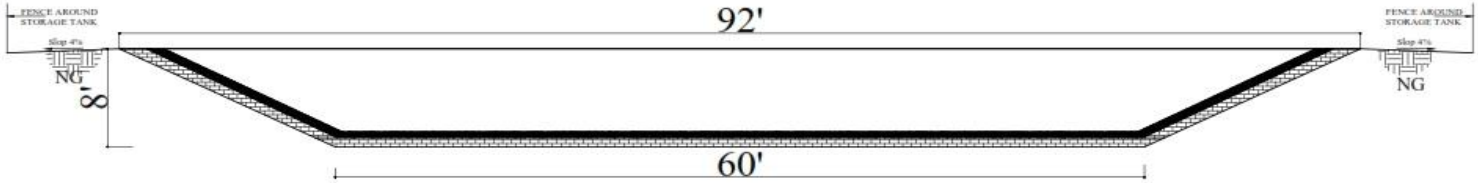
BEAM 12" x 24"

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: 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 1180CFT	SCALE NTS
					SUBMITTED				
					RECOMMENDED				
					CHD./VER.	ALI RIZWAN		DATE MARCH, 2023	DWG NO. CC/SFERP/WST-05
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

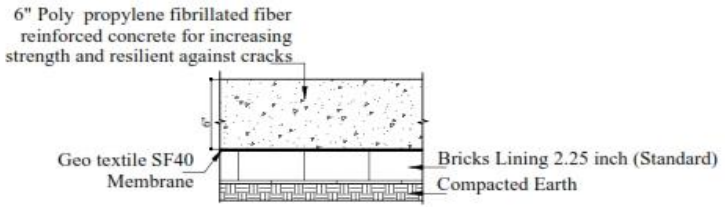

Capacity = 1180 Cft
EXCAVATION PLAN
BOTTOM SLAB & BEAM
TOP SLAB
TYPICAL SECTION
PLAN OF O . H W TANK
FRONT ELEVATION
COL-1
15" x 15"
PLINTH BEAM 12" x 18"
BEAM 12" x 24"
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CAMEOS CONSULTANTS
DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES IN
SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
PLAN AND SECTION OF OVERHEAD WATER STORAGE TANK CAPACITY 1180CFT
MARCH, 2023
CC/SFERP/WST-06
SCALE NTS


varies as per drain width
4'
A
A
2"
Air Providing Holes
Lifting Hooks
Steel ½" Ø
Plan of Slab
⅜" Ø @ 6" C/C
4'
R.C.C 1:2:4
6"
Section of Slab
⅜" Ø @ 6" C/C
R.C.C 1:2:4
varies as per drain width
6"
Section of Slab
R.C.C Slab
Coping P.C.C 1:2:4
1'-3"
6"
2'-6"
Brick Masonry
1:4:8 Concrete
3"
4'
Drain Type-I
R.C.C Slab
Coping P.C.C 1:2:4
1'-6"
6"
3'
Brick Masonry
1:4:8 Concrete
3"
4'-6"
Drain Type-II
Coping P.C.C 1:2:4
R.C.C Slab
3"
Brick Masonry
3'-6"
2'-3"
1:4:8 Concrete
3"
5'
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
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:-
DRAIN SECTIONS
SCALE
NTS
DATE
MARCH, 2023
DWG NO.
CC/SFERP/DS-01

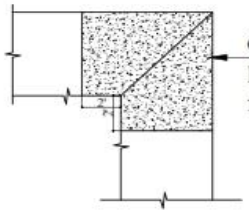

182'
8'
See Detail A-A
NG
WATER STORAGE TANK L-SECTION
See Detail B-B
150'
92'
60'
182'
WATER STORAGE TANK PLAN
CLIENT:
PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH
CONSULTANTS:
CAMEOS CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS.
HOUSE # A-134 BLOCK-L NORTH NAZIMABAD, KARACHI.
PH# +92- 21- 36630135, Email: cameoskhi@gmail.com
REV. DATE DESCRIPTION APPROVED
DRAWN 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:-
REHABILITATION OF EXITING RESERVOIR
SCALE NTS
DATE MARCH, 2023
DWG NO. CC/SFERP/PWST



WATER STORAGE TANK X-SECTION



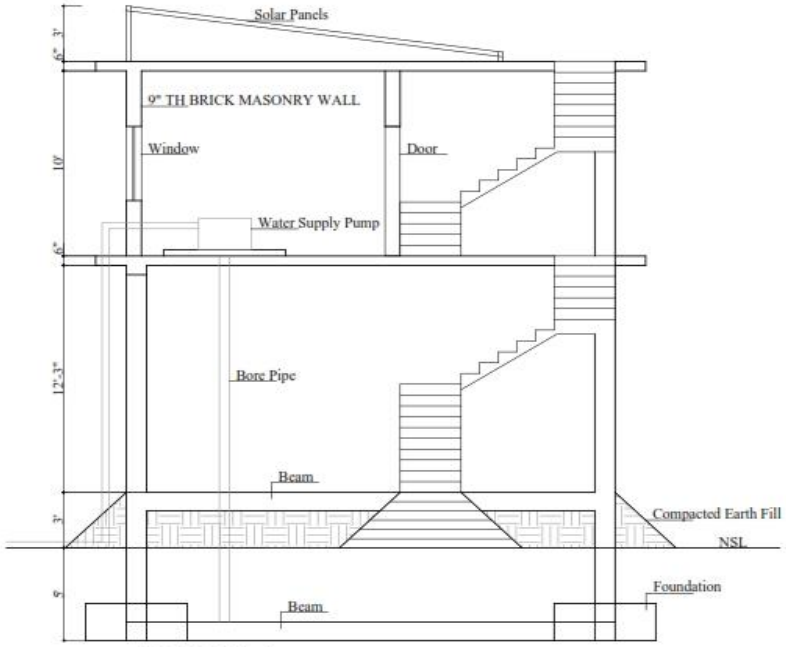
Detail A-A



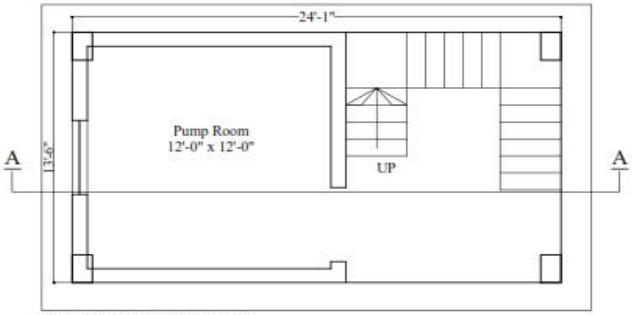
Detail B-B
Joint treatment with
Geo textile SFS6 membrane

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- 36630139, Email: cameokhi@gmail.com			DRAWN: JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
				SUBMITTED:	
				RECOMMENDED:	
				CHD./VER.: ALI RIZWAN	SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
	REV.	DATE	DESCRIPTION	APPROVED: APPROVED	

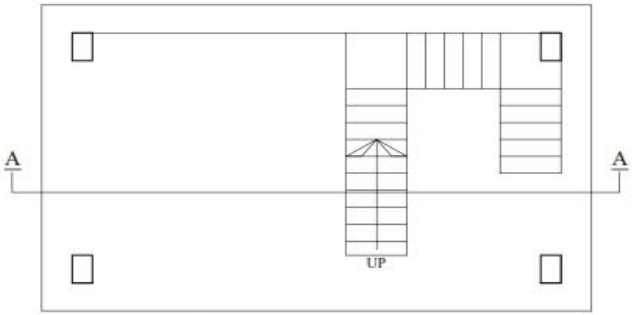
DRAWING TITLE:- EXISTING RESERVOIR X-SECTION & EXPANSION JOINT DETAIL		SCALE: NTS
DATE: MARCH, 2023	DWG NO.: CC/SFERP/WST-01	



SECTION A-A

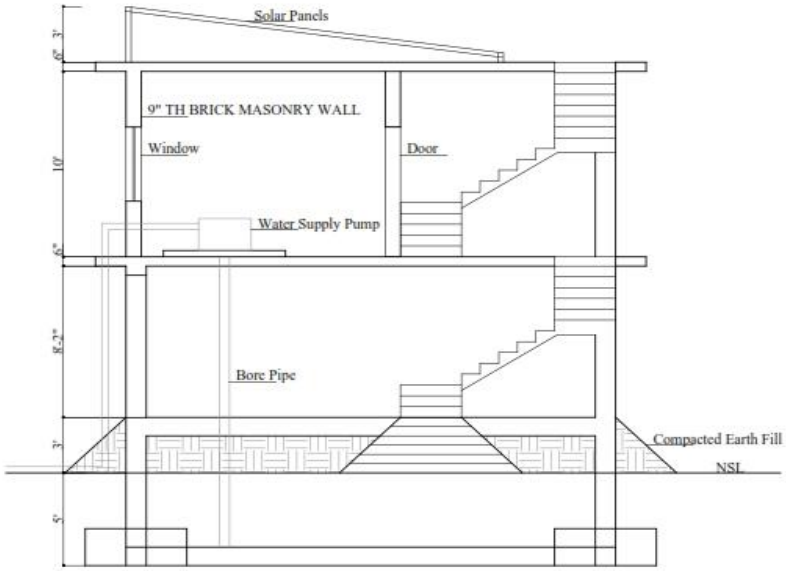


FIRST FLOOR PLAN

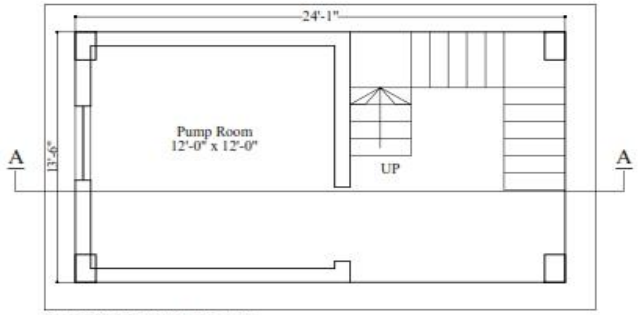


GROUND FLOOR PLAN

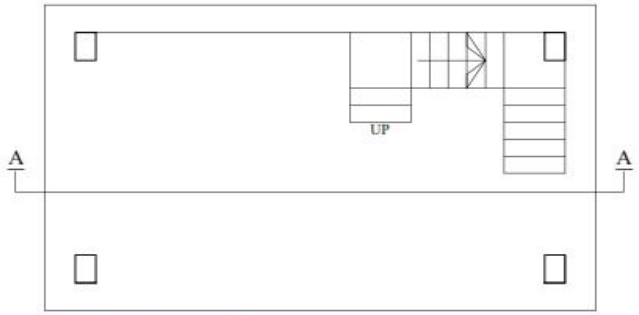
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: camcookhi@gmail.com					DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED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



SECTION A-A

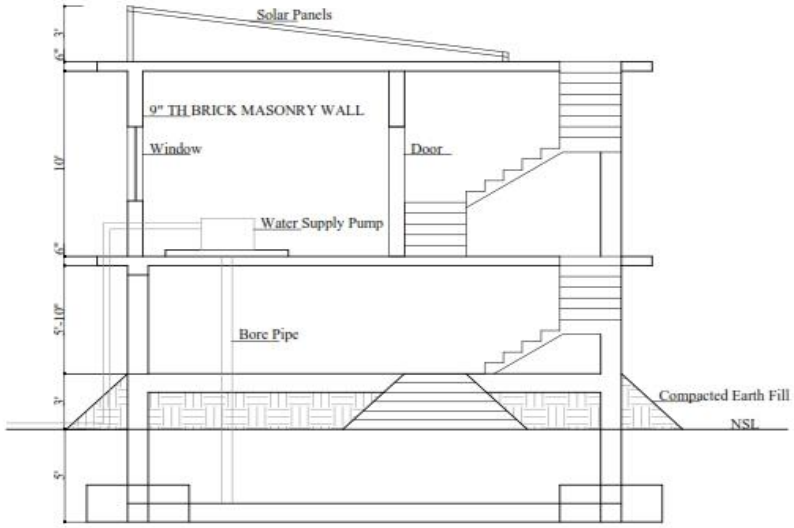


FIRST FLOOR PLAN

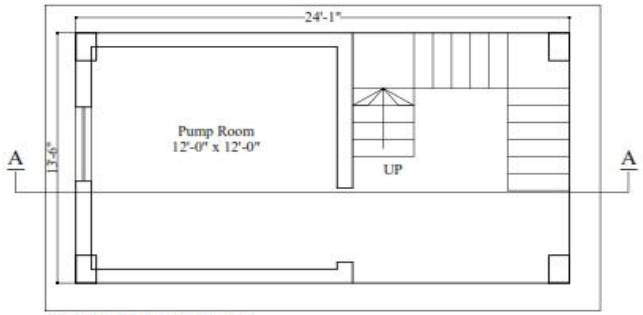


GROUND FLOOR PLAN

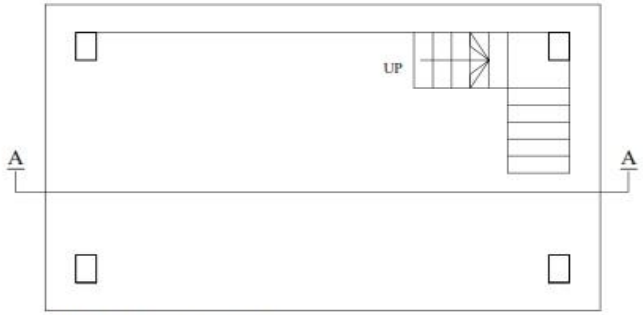
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: camcookhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES 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

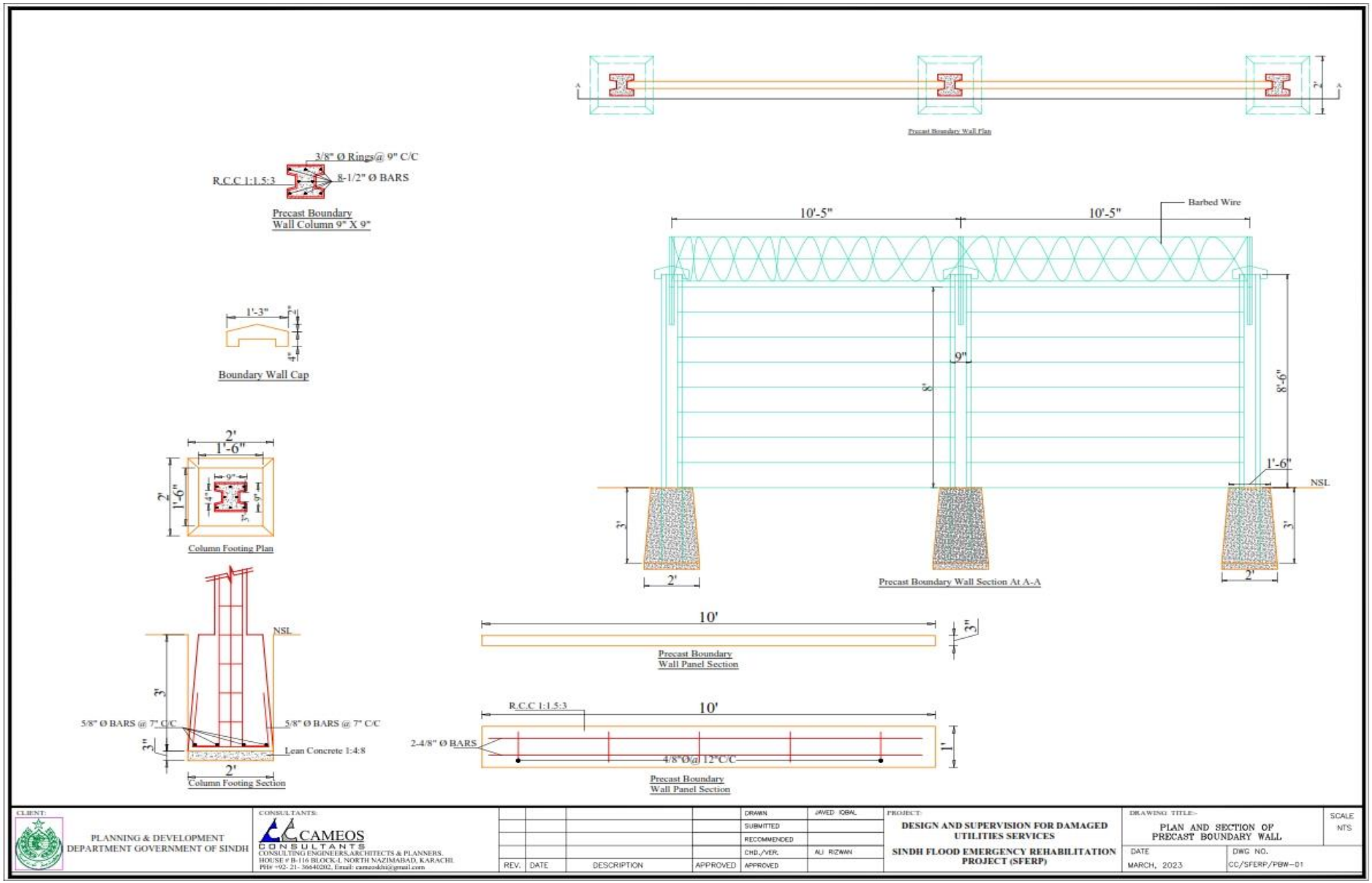


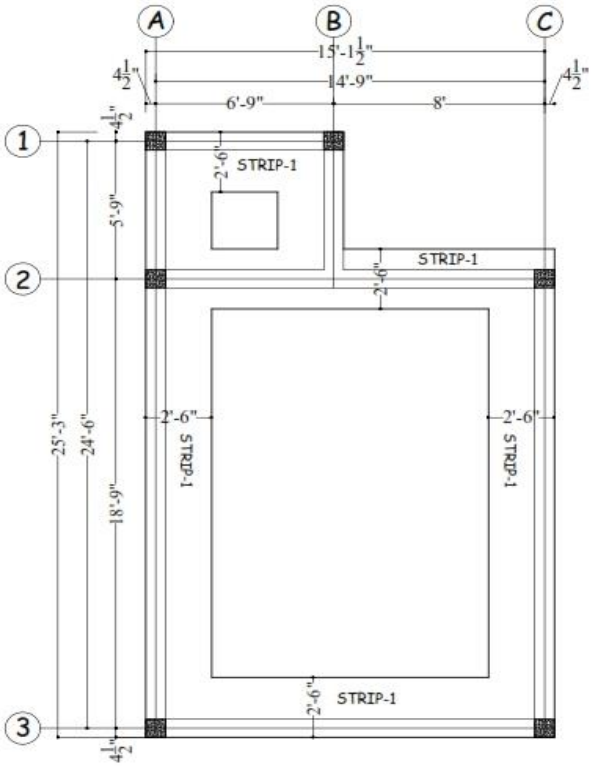
FIRST FLOOR PLAN



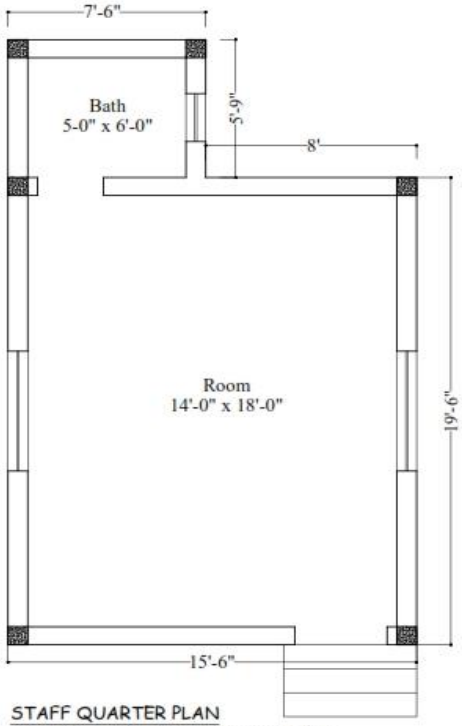
GROUND FLOOR PLAN

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				


Precast Boundary Wall Plan
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"
Barbed Wire
10'-5"
10'-5"
9"
8"
8'-6"
1'-6"
NSL
3"
2'
Precast Boundary Wall Section At A-A
1'-3"
Boundary Wall Cap
2'
1'-6"
Column Footing Plan
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
10'
3"
Precast Boundary
Wall Panel 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
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:-
PLAN AND SECTION OF PRECAST BOUNDARY WALL
SCALE
NTS
DATE
MARCH, 2023
DWG NO.
CC/SFERP/PBW-01



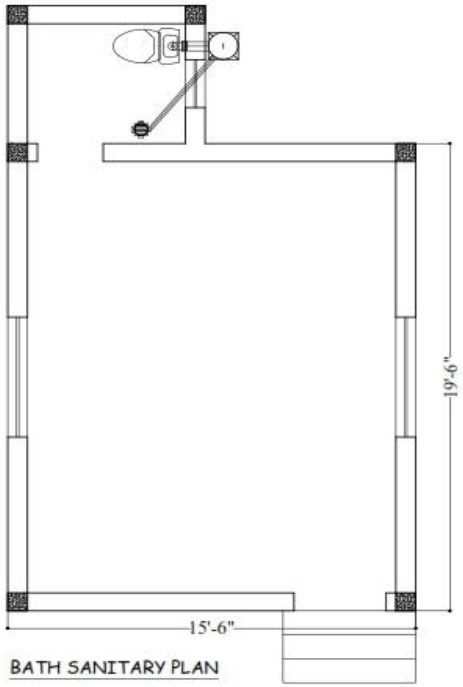
STAFF QUARTER LAYOUT PLAN



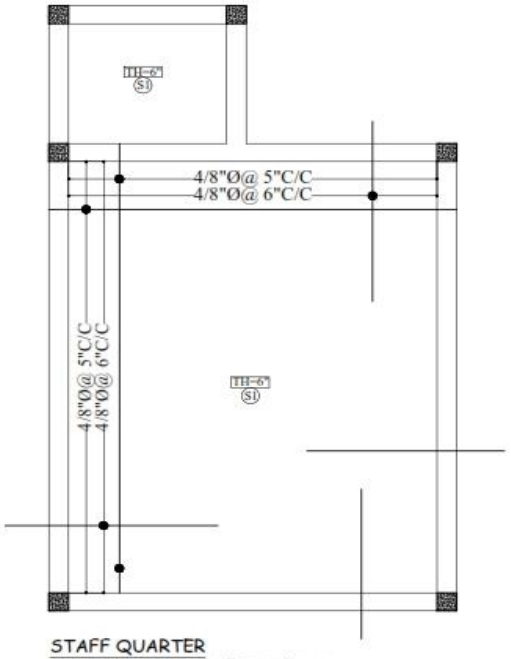
STAFF QUARTER PLAN
COVERED AREA (476.625 square ft.)

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: JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES SERVICES
				SUBMITTED:	
				RECOMMENDED:	
				CHD./VER.: ALI RIZWAN	SINDH FLOOD EMERGENCY REHABILITATION PROJECT (SFERP)
REV.	DATE	DESCRIPTION	APPROVED	APPROVED:	

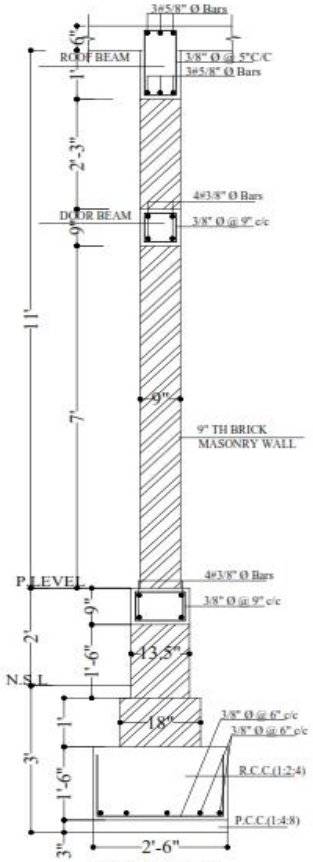
DRAWING TITLE:- LAYOUT PLAN OF STAFF QUARTER		SCALE: NTS
DATE: MARCH, 2023	DWG NO.: CC/SFERP/SQ-01	



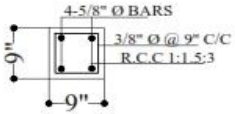
BATH SANITARY PLAN



STAFF QUARTER
SLAB REINFORCEMENT DETAIL

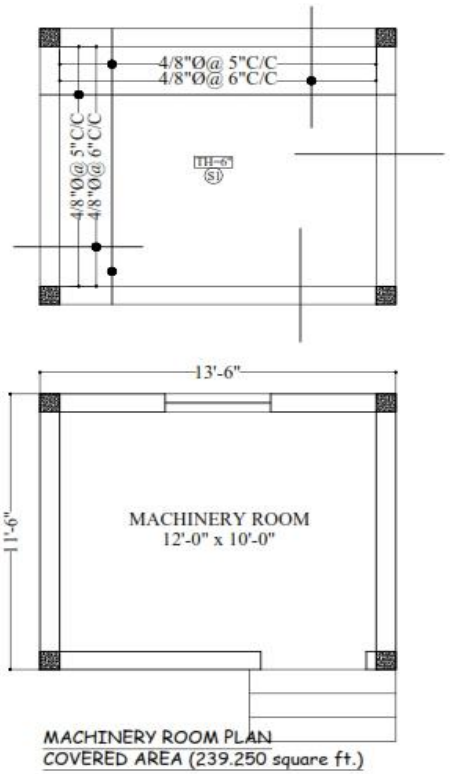


STRIP-01 SECTION
WALL FOOTING DETAIL

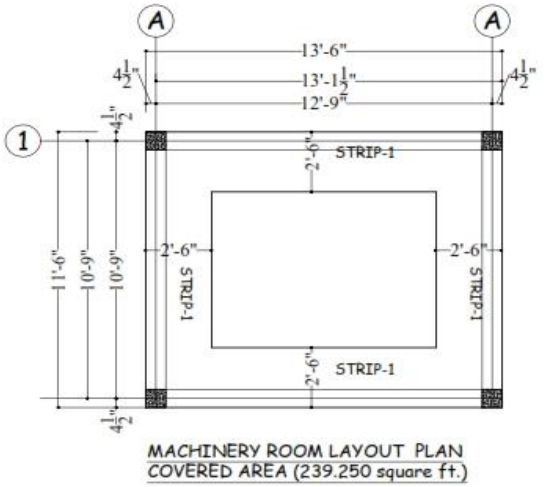


COL-1
9" X 9"

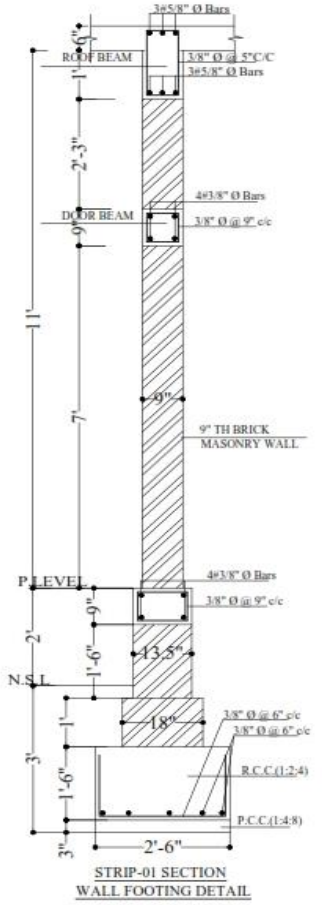
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: camcookhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES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



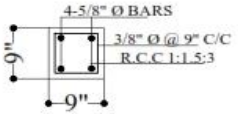
MACHINERY ROOM PLAN
COVERED AREA (239.250 square ft.)



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

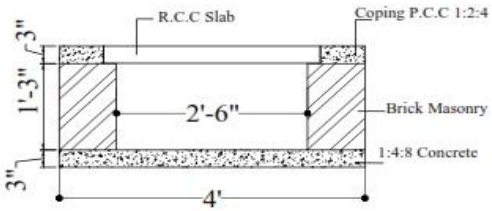


STRIP-01 SECTION
WALL FOOTING DETAIL

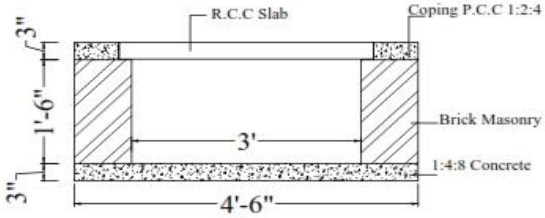


COL-1
9" X 9"

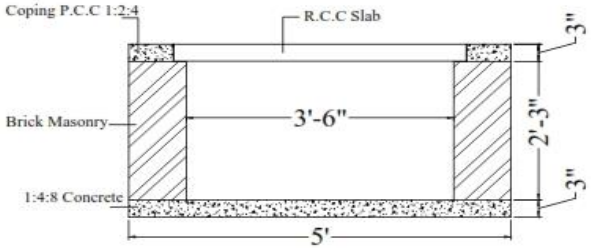
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameoskhi@gmail.com				DRAWN	JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES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



Drain Type-I



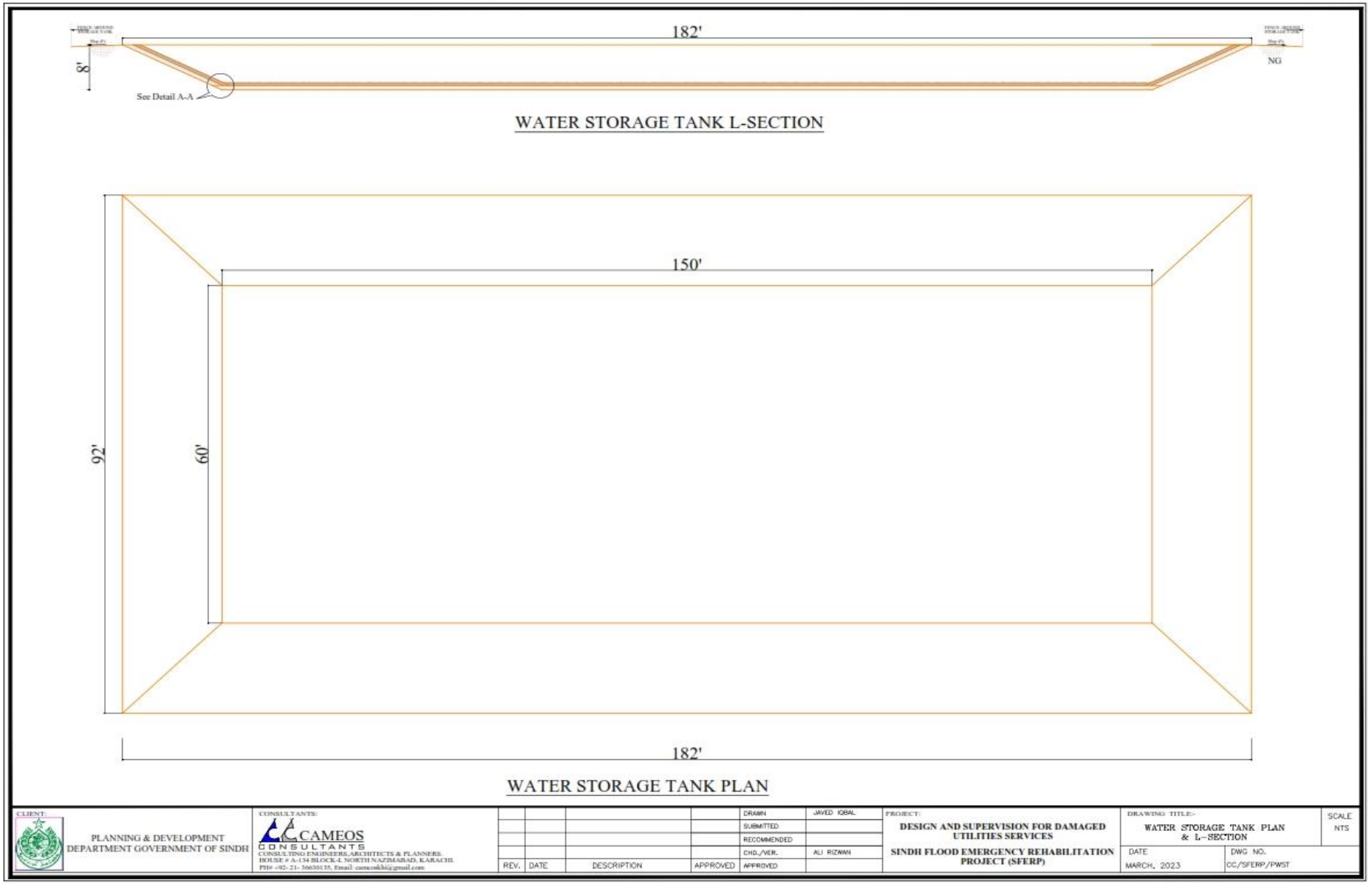
Drain Type-II

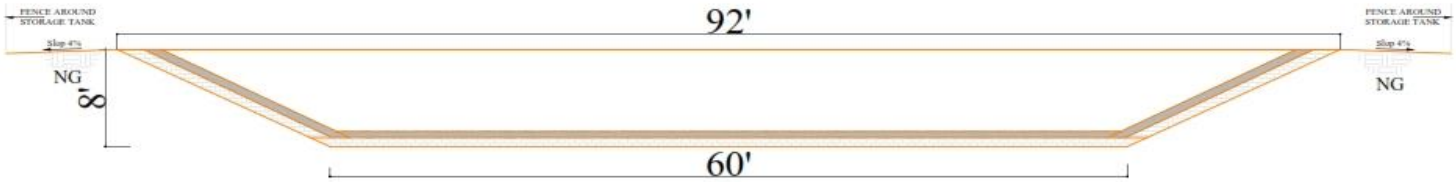


Drain Type-III

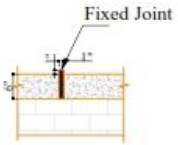
CLIENT: PLANNING & DEVELOPMENT DEPARTMENT GOVERNMENT OF SINDH	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS, ARCHITECTS & PLANNERS. HOUSE # B-116 BLOCK-L NORTH NAZIMABAD, KARACHI. PH# +92-21-36640202, Email: cameoskhi@gmail.com			DRAWN: JAVED IQBAL	PROJECT: DESIGN AND SUPERVISION FOR DAMAGED UTILITIES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

DRAWING TITLE:- DRAIN SECTIONS | SCALE: NTS | DATE: MARCH, 2023 | DWG NO.: CC/SFERP/DS-01


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# +92-21-36630135, Email: cameokhi@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



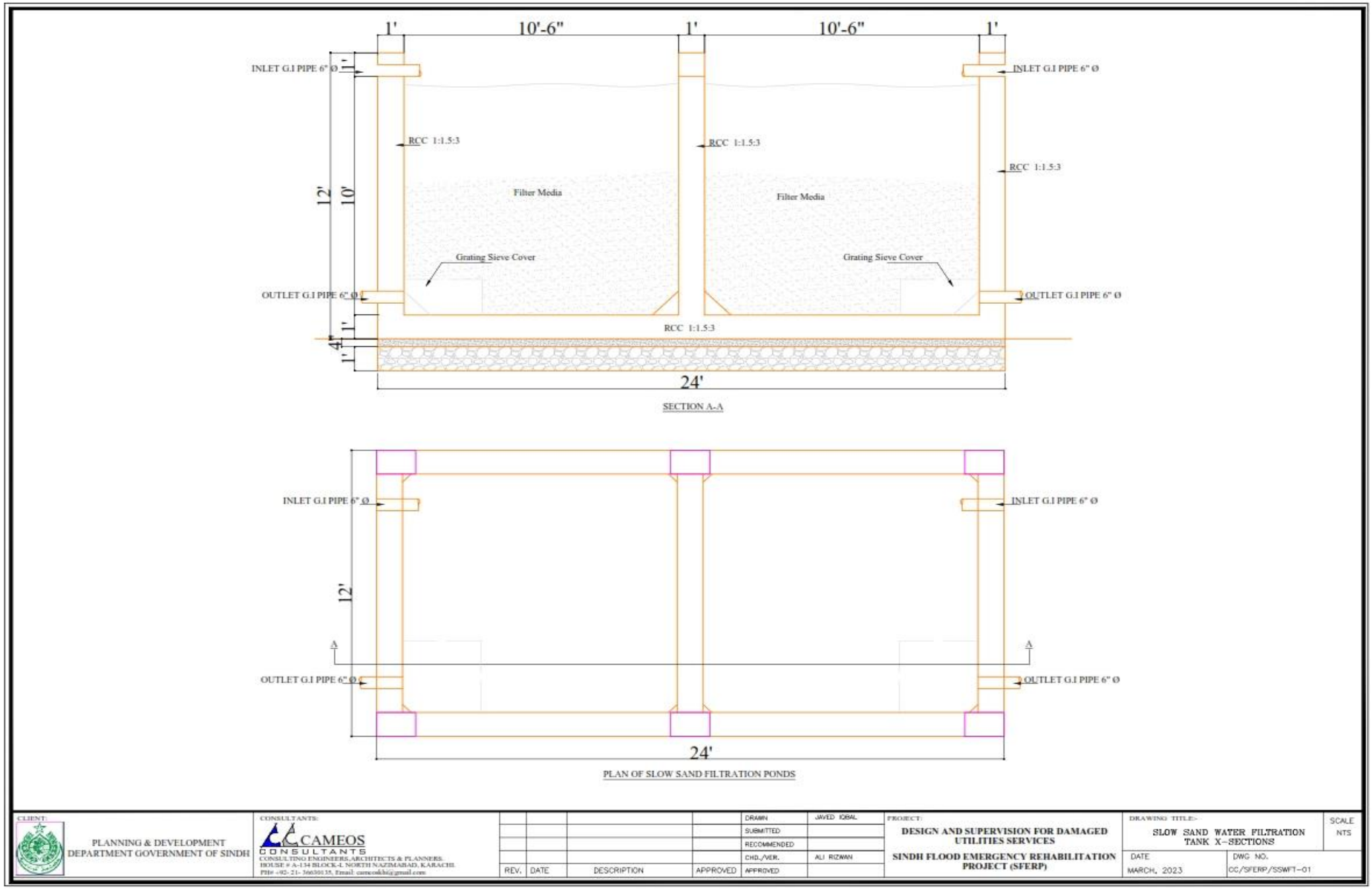
WATER STORAGE TANK X-SECTION

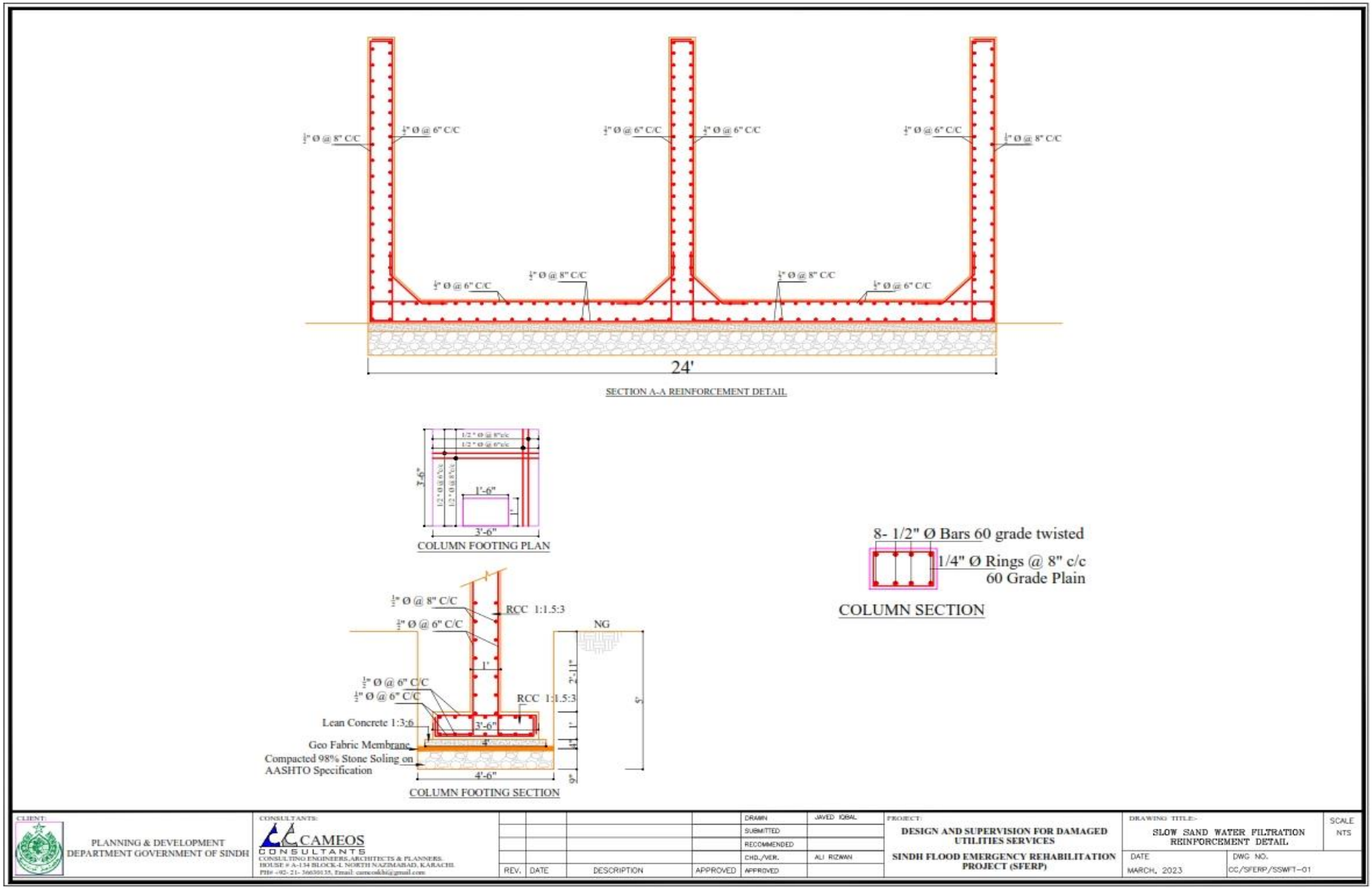


Detail of Expansion Joint

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: cameokhi@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
¾" Ø @ 6" C/C
¾" 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
NTS

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 ٽيل 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 جزوء حڪومت سنڌ

جڳهه/Location: نوشهرو فيروز

سب پروجيڪٽ جو نالو/Subproject Name::

تاريخ/Date: [illegible]/2023

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
	تحصيل [illegible] - گوٺ تورو [illegible]	کسان	45301-6478241-9	جوانڪ خان ملاح	محمد ايوب	.1
	تحصيل [illegible] گوٺ تورو [illegible]	کسان	45301-9276731-5	محمد اسماعيل	مولا بخش	.2

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
[illegible]	تحصیل بھریا گوٹھ حاجی محمد مراد	کسان	45301-4210788-5	گھنور خان	وزیر احمد	.3
	تحصیل بھریا گوٹھ غوث بخش	کسان	45301-777823+7	محمد اسماعیل لھرائی	اعتبار علی	.4
محمد ملوک	تحصیل بھریا گوٹھ دریاخان	کسان	45301-5493655-3	محمد ملک	محمد ملوک ملاح	.5
	تحصیل بھریا گوٹھ حاجی محمد مراد	کسان	0301-3217068 موبائل	عبدالغفور	سیر بخش	.6
غلام رسول	تحصیل بھریا غلام النبی	کسان	45301-3654315-9	محمد مرس	غلام رسول	.7
[illegible]	تحصیل بھریا گوٹھ حاجی محمد مراد	کسان	45301-8681398-7	مراد بخش	محمد خالد	.8
لھرائی	تحصیل بھریا گوٹھ غوث بخش	ڈرائیور	45301-2646461-7	ساون	صاحب خان	.9
ولی محمد	تحصیل بھریا گوٹھ حاجی محمد مراد	کسان	45301-1271014-5	قائم الدین	ولی محمد	.10
نصیب دین	عبدالمجید گوٹھ بھریا	کسان	45301-3044474-1	عبداللہ	نصیب دین	.11

Page 2 of 6

Government of Sindh 2/11/2022

SFERP

Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / آنگوٺي 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
نواب	گوٹھ بخشل سھتو تعلقو کنڈيارو	ڈرائيور	45302-5428153-1	محرم علي بروهي	آفتاب علي	.12
دوست محمد	گوٹھ دين محمد کنڈيارو	ڈرائيور	45302-5430630-9	جان محمد	دوست محمد	.13
پرويز	وارڊ نمبر 7 کنڈيارو	مزدوري	45302-1833115-7	رحمت علي ملک	پرويز	.14
شاهد	وارڊ نمبر 7 کنڈيارو	مزدوري دکان	45302-9173540-1	رحمت علي ملک	شاهد علي	.15
(thumb impression)	گوٹھ بخشل سھتو کنڈيارو	کسان	0302-2369600	نور محمد بروهي	جمال احمد بروهي	.16
عبدالرسول	گوٹھ بخشل سھتو کنڈيارو	کسان	45302-4082742-7	امير علي بروهي	عبدالرسول	.17
اکبر	گوٹھ بخشل سھتو	کسان	0312-313751	امير علي بروهي	اکبر	.18
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Qazi...	وارڈ نمبر ۱ محراب پور	ڈرائيور / رکشا	45201-6702617-3	محمد اکرم جميل	افضل ملک	.21
اصغر علي	محلہ محمد حسين - محراب پور	کسان	45201-9751[illegible]-1	شاہ محمد ملک	اصغر علي	.22
بشير احمد	وارڈ نمبر 7 - محراب پور	دوکاندار	45201-1660013-7	اسد علي ملک	بشير احمد ملک	.23
AR...	وارڈ نمبر 8 - محراب پور	مزدور	45201-786604	اسد علي قريشي	عبدالرحمن قريشي	.24
راشد علي	وارڈ نمبر 7 - محراب پور	ڈرائيور	45201-5015129-7	بشير احمد ملک	راشد ملک	.25
Azam	وارڈ نمبر 7 محراب پور	ڈرائيور	45201-0432695-5	امام بخش	زبير	.26
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جنت خاتون	همت علي شيخ ڳوٺ نوشهرو فيروز	مزدور	0312 3479101	حبيب احمد	جنت خاتون	.30
مائي جيع	=	=	0309 5328817	واحو ڏنو	مائي جيع	.31
[signature]	=	استاد	0344 39918101	محمد مغل	سهڻي خاتون	.32
زينت	=		0312 8732351	دين محمد	زينت	.33
تبسم	=	شاگرد	0314 6623799	شهزاد علي	تبسم خاتون	.34
زهران	=	[illegible]	0346 7800623	سرور	زهران	.35
ڪريم	=		0347 9833812	الطاف	ڪريم ڏنو	.36
سراج	=	شاگرد	0342 7924262	برڪت	سراج	.37
Sgjaed	=	مزدور	03[illegible] 9235143	دادا رحيم	سجاد حسين	.38

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نبی بخش	هيبت سمي شيخ گرن	مزدور	~~0300~~ 0311 8124236	جمعو شاه	نبي بخش	.39
سراج		هارکو	0342 7924262	برکت	سراج	.40
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