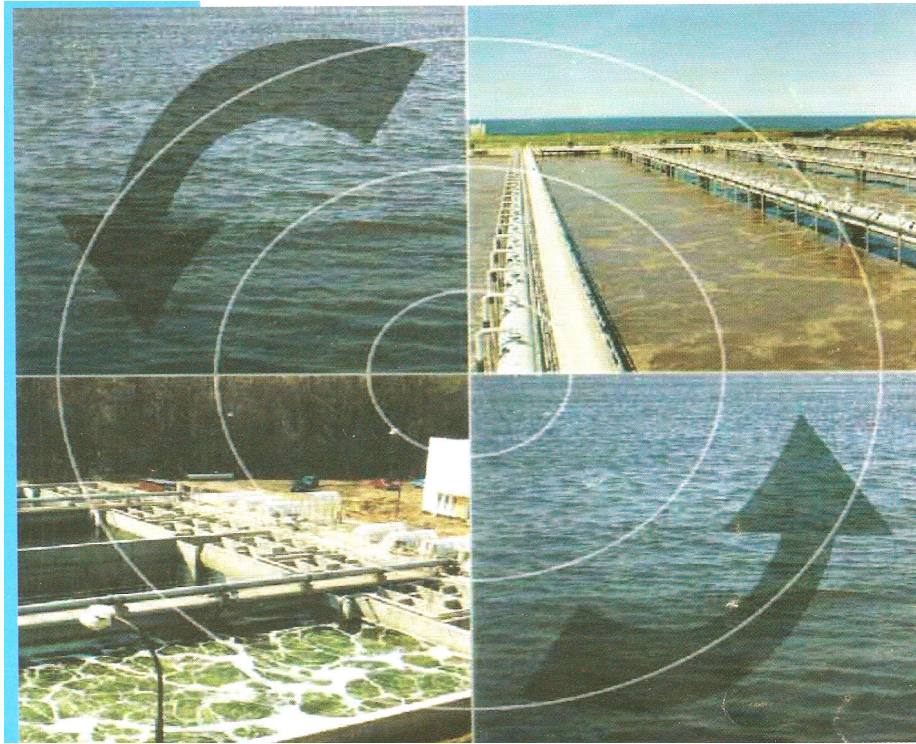


UNDERGROUND DRAINAGE SCHEME



DETAIL PROJECT REPORT FOR KARANJA MUNICIPAL COUNCIL, KARANJA DIST.-WASHIM

MAY - 2007

PREPARED BY

KIKALE ASSOCIATES

CONSULTING ENGINEERS,
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EXECUTIVE SUMMARY

- 1.0 The Karanja Municipal Council has awarded the work of preparation of Detailed Project Report, Detailed Engineering and Design of the sewerage scheme for Karanja Town and Detailed Estimation of the Project to M/S. Kikale Associates, Consulting Engineers, Baramati, Pune.
- 1.1 The survey of the Karanja town is carried out and accordingly sewerage system has been designed based on the Manual on sewerage and sewage treatment published by CPHEEO and also as per the guidelines of UIDSSMT.
- 1.2 Karanja is an important town in Washim district of Maharashtra State. It is situated at 75 Km from Akola. The area covered by Karanja Municipal Council is 1355.43 Ha. The population of Karanja town is 60158 as per 2001 census and the population projected for the year 2040 is 115983 souls. The source of water supply to Karanja town is Adhan dam. The water is supplied at a rate of water supply is 90 lpcd and the water supply is being augmented to 135 lpcd.
- 1.3 The details of the proposed underground drainage scheme are as follows:
The topography of Karanja town is such that the general slope of the town is towards North. The total area is divided into eight drainage zones and the total flow is ultimately collected at pumping station no PS1 and PS2 which pump the flow respectively to the proposed STP1 of 8 mld and STP2 of 3mld capacity with Cyclic activated sludge process. The gross cost of the proposed sewerage system is **Rs. 2797.53 Lakhs**.
- 1.4 Project Component consists of collection system, Pumping station, pumping main and sewage treatment plant. As the pipes are to be laid in Municipal or Highway Roads, no land acquisition is required.

All the proposed locations of pumping stations and STPs are decided in co-ordination with Municipal Council officials and it is understood that there would be no problem in undertaking of land.

1.5 Implementing agency should carry out the works in co-ordination with other related organizations (viz) Traffic Police, Public Works Department and other Local Body Authorities and in accordance with code of conduct.

1.6 The details of the proposed underground sewerage scheme are as follows:

1) Population

Year	Population	Wastewater flow (mld)
2010	69822	3.0
2025	89914	4.04
2040	115983	5.42

2) Collection System

Total length = 69 Km
Diameter = 200mm to 700 mm
Pipe material = RCC NP2, NP3 and NP4 pipes

3) Rising Main

Sr. No.	Description	P.S.1	P.S.2	P.S.3	P.S.4
a)	Diameter	400 mm	300mm	200 mm	200 mm
b)	Length	1025 m	200 m	890 m	750 m
c)	Material	D.I k9 pipe	D.I k9 pipe	D.I k9 pipe	D.I.k9 pipe

4) Pumping Machinery

Description	P.S.1	P.S.2	P.S.3	P.S.4
a) Pumps	Submersible pumps	Submersible pumps	Submersible Pumps	Submersible Pump
b) (1DWF) Discharge (lps)	97	39	19	16
Head	19	12.5	14	13
Nos	2W+1S	2W+1S	1W+1S	1w + 1s
H.P	40	10	5	5
c) (½DWF) Discharge (lps)	Submersible pumps	Submersible pumps	Submersible Pump	Submersible Pump
Head	49	20	-	-
Nos	15	12	-	-
H.P	1W+1S	1W+1S	-	-
	15	5	-	-

5) **Sewage Treatment Plant**

Description	STP 1	STP 2
Capacity	8 mld	3 mld
Type	SBR Technology	SBR Technology

Current Status

The project is submitted to the Municipal Council.

KARANJA UNDERGROUND SEWERAGE SCHEME

SUMMARY OF COST

Sr. No.	Name of Subwork	Amount in Rs.
1	Working Survey	300000.00
2	Sewage Collection System	154180512.00
3	Sewage Pumping Station No.-1	
3A	Civil Works	1453895.79
3B	Mechanical & Electrical Works	6019270.81
3C	Rising Main For PS-1	3517102.37
4	Sewage Pumping Station No.-2	
4A	Civil Works	814792.67
4B	Mechanical & Electrical Works	4108031.92
4C	Rising Main For PS-2	540877.57
5	Sewage Pumping Station No.-3	
5A	Civil Works	424350.09
5B	Mechanical & Electrical Works	2496351.73
5C	Rising Main For PS-3	1411279.40
6	Sewage Pumping Station No.-4	
6A	Civil Works	436249.65
6B	Mechanical & Electrical Works	2496351.73
6C	Rising Main For PS-4	1215157.77
7	Sewage Treatment Plant(STP1-8mld)	50542207.46
8	Sewage Treatment Plant(STP2-3mld)	23391286.46
9	Miscellaneous Works	973202.23
	Total	254320919.65
	Add Escalation Charges (10%)	25432091.97
	Cost of the Scheme	279753011.62