

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in

Techies (Civil Engineering Department (DLM) 8th Semester) and professors at Sir Bhavsinhji Polytechnic Institute at Bhavnagar Innovation Sankul successfully did project work on environmentally pollution free atmosphere of village Sanosara through properly designed drainage scheme : A real effort of “integrating minds and socializing technologies “

Introduction:

- Sanosara is one of the Village in Sihor Taluka in Bhavnagar District in Gujarat State which is suffering from environmental pollution of waste water release.
- The present population of the village is about 10,000 souls.
- The village is supplied 70 LPCD (liter per capita per day) water supply from different sources.
- Underground drainage lines are laid in certain area but not covering the entire village and most of the laid drainage lines are not functioning properly due to poor gradient & adequate workmanship.
- DRDA & Panchayat proposed to survey the entire village & give the Hydraulic design of sewage system to Civil Engineering department of Sir Bhavsinhji Polytechnic Institute, Bhavnagar.
- 27 students of final year Civil Eng. Took up this project and surveyed the entire village Sanosara on 19th & 20th March 2012 & prepared a report of entire underground drainage scheme of Sanosara with Hydraulic design & submitted to DRDA & Panchayat for further execution.
- The entire project was covered under Community Development Scheme in the area of community services.
- HOD of Civil & I/C Principal Dr. K.G. Mehta, Cordinator CDTP and Head of Fabrication Technology Dr. G.D. Acharya , Co-chairman, Bhavnagar Innovation Sankul along with staff members of civil engineering department Shri P.B. Shah & Shri A.V. Chudasama put tremendous effort for successful completion of this project.
- At present waste water is released in the open Nala near Bhavnagar-Rajkot road which is creating environmental pollution problem for the village.
- Now the entire system is redesigned and total waste water is being released on Vavdi road which is about 900M away from Bhavnagar-Rajkot road.
- Looking to the discharge of waste water and discussion with Panchayat authorities, waste land is available near new designed effluent point.
- As it is suggested in the report, construction of Oxidation Pond of final disposal point on Vavdi road is suggested to be constructed so that entire village will get release from nuisance of waste water and its hazardous effects.

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in

Benefits to the Students:

- a) Ability to make extensive and accurate survey work.
- b) Development of competency for Hydraulic design of Sewage system.
- c) Use of extensive 2D AutoCAD command for preparation of drawing.
- d) Development of ability to prepare major Sanitation project independently.
- e) Students gained practical knowledge of surveying, Hydraulic, Civil Engineering Drawing, Quantity Survey, etc.
- f) Developing culture of innovation at Bhavnagar Innovation Sankul.
- g) Involving young students from polytechnic in front role of strengthening the activities at Bhavnagar innovation Sankul.

Design of Drainage System

Drainage system

- Drainage, it is the artificial or natural removal of surface and sub-surface water from an area.
- The agricultural soil requires the drainage for improving production and to manage the water supplies.
- The design of drainage system refers to sustainable rural drainage system.

Sustainable drainage systems

- The design of drainage system includes sustainable drainage system.
- This is sometime called as Sustainable Rural drainage systems (SRDS) this is designed to reduce the potential impact of the new and existing developments in respect with surface water drainage discharges.
- To reproduce the natural systems is the idea behind SRDS.
- This reduces the effective cost with low environmental impact to drain away dirty and surface water collections, and cleaning them before allowing it released slowly back into environment, i.e. into water courses.

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in

Name of Faculties from Bhavnagar Innovation Sankul who helped this :

1. Dr. K.G. Mehta, I/C Principal, Sir B.P.T.I., Bhavnagar.
2. Dr. G.D. Acharya, Head Fabrication Technology Dept., Co-Chairman, Academic. Bhavnagar Sankul
3. Prof. P.B. Shah, Lecturer Civil Eng. Dept.
4. Prof. A.V. Chudasama, Lecturer Civil Eng. Dept.

Name of Students:

1. Bhaliya prakash n.
2. Chohla gopal m.
3. Gohil yashpal a.
4. Goswami nayanpuri b.
5. Jotaniya kishan v.
6. Kakadiya mayur k.
7. Lukhi maulik g.
8. Pandya maulik k.
9. Parmar rahul b.
10. Patel milan d.
11. Peshavariya kalpesh m.
12. Rajput jigisha l.
13. Savani bhavik r.
14. Solanki jaimin v.
15. Vala jignesh c.
16. Nakum kalpesh b.
17. Patel naman u.
18. Vaghela paresh r.
19. Chudasama dharmesh y.
20. Kushvaha dhirendra b.
21. Ramani gopal b.
22. Maru vijay j.
23. Sarvaiya mohin
24. Trivedi nishith r.
25. Pandya lilesh p.

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in

26. Devmorari sughir c.

27. Trivedi rahul v.

28. Kuvad dhiman r.



Village introduction & work distribution by Dr. K.G. Mehta &

Dr. G.D. Acharya along with Sarpanch, Talati & Panchayat members of village Sanosara

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



Students of Bhavnagar Innovation Sankul at project site of Sanasora along with Prof. K.G. Mehta

Sir Bhavsinhji Polytechnic Institute,

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



A Visit of students of Civil Eng. to Lokbharti Gramvidhyapith Sanasora,
Dr. Arunbhai Dave (Director, Lokbharti Gramvidhyapith)

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



Mr. Desai from DRDA, Bhavnagar
visit the project site



Students at Lok-bharti Gramvidhyapith



Students at Project site of Sanasora

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



Students along with Prof. A.V. Chudasama



GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



DDO Mr. Ranjitekumar, Principal Prof. Dr.K.G. Mehta, Prof Dr. G.D. Acharya, Mr. Desai & Mr. Chauhan DRDA, Bhavnagar, discussing about the drainage project of Sanosara.



Inauguration function for submission of Project report

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



Inauguration function

Welcoming Mr. Ranjithkumar with a bouquet



Submission of Project report to the DDO, Bhavnagar.

GTU INNOVATION COUNCIL

www.gtuinnovationcouncil.ac.in



(L to R) Mr. Desai, Mr. Chauhan (DRDO), Mr. Ranjithkumar (DDO), Prof Dr. K.G. Mehta, Ghanshyambhai Patel (Sarpanch), Dr. G.D. Acharya, Mr. Ghanshyambhai Bhatt (Talati Mantri of Sanasora), Prof. P.B. Shah, Prof. M.M. Parekh & Prof. A.V. Chudasama with students.