DOC NO: 1426

"WHERE SUCCESS IS A TRADITION"

A Report on

Contour Survey Project

Organized by

Civil Engineering Department

on

08/04/2022

Gandhinagar Institute of Technology

Academic Year 2021-22

Level: - Department

Category: - Project

Date: - 08/04/2022

No. of Participants: - 26 (students-21, faculties- 2, Lab Assistant- 3)

Coordinator and Co-coordinator name:

Prof. Amit Singh (Coordinator)

Prof. Paresh Umredkar (Co -

Coordinator)

Mode: - Offline

Contour Survey Project:

As the proverb goes "The Logic Can Take You from a to b, But Imagination Can Take You Anywhere" it perfectly corroborates to the magnificent creations of civil engineering which have been built by the admirers of Civil Engineering following their creative insight. No other branch of engineering is much more creative and ingenious as Civil Engineering is, so in order to cater the creative minds of civil engineering students and to make them abreast with the practical side of their coursework, a contour survey project was conducted on 08 April 2022. A group of 21 students got an opportunity to learn the basics of contour survey work to carry out existing topographical condition of lane at GIT campus play ground accompanied by faculty members Prof. Paresh Umredkar, and Prof. Amit Singh with Lab assistant Jayesh Bhai, Jitendra Bhai & Bharat Bhai of Civil Engineering Department.

Purpose of Contour Survey:

Our main purpose for this survey is to make students familiar with field environment and to get practical knowledge of surveying and use of its instruments in field. Also in 4th semester subject like Surveying requires knowledge about how different instruments are used in the field. Contour survey is carried out at the starting of any engineering project such as a road, a railway, a canal, a dam, a building etc.

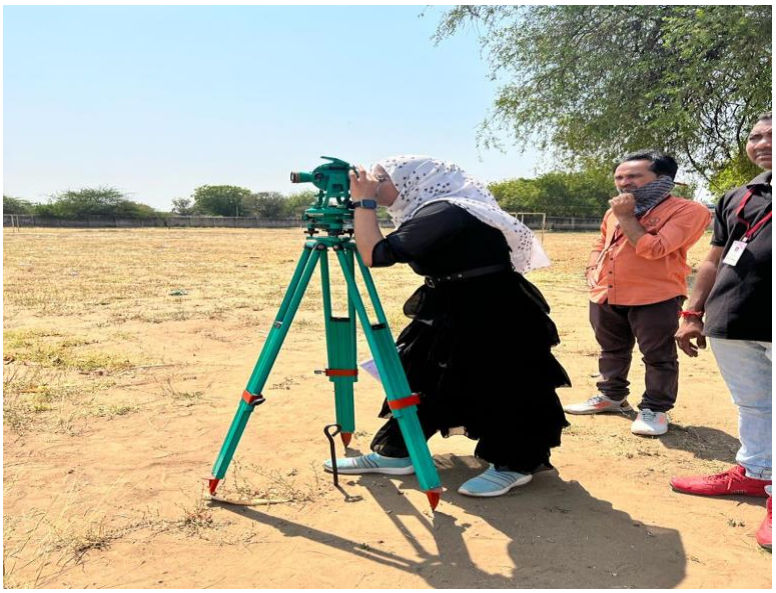
- For preparing contour maps in order to select the most economical or suitable site.
- To locate the alignment of a canal so that it should follow a ridge line
- Tracing of contour gradients, location of route, and measurement of drainage area and calculation of reservoir capacity.

A contour line is a line that connects points of equal elevation. Contour survey is usually carried out in order to have an accurate record of the existing conditions of a portion of land that is about to undergo some type of construction activity.

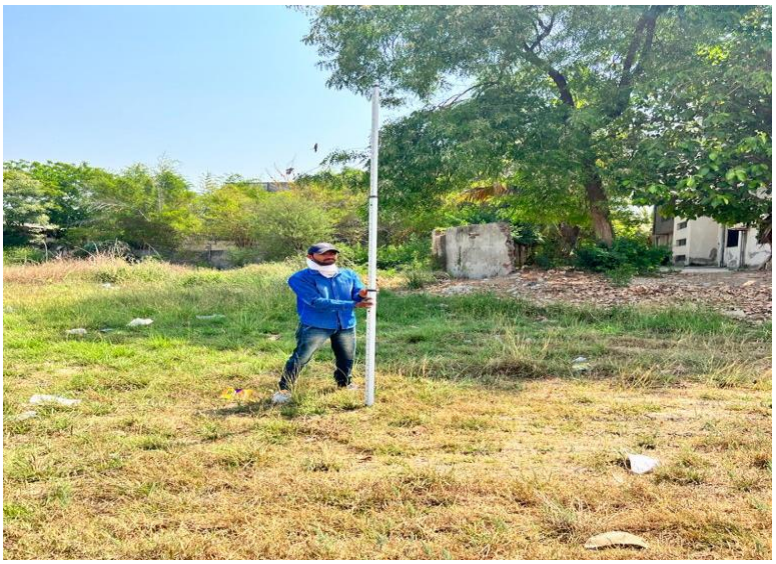
What Students Learn From Project?

Firstly students have learned importance of contour survey and methodology to perform contour survey. Then we move towards the field. At field we fix four different station points and one bench mark. Then some students were provided compass to measure the FB & BB of all station points. Students have taken staff reading over all the different points fixed over the ground. The students were guided that how to take staff readings. Radial method is adopted in order to perform contour survey work. Readings were taken at every 30^{o} angle interval from each station point. The project work was completed by 01:00 pm. Data analysis has been done in class room and students have learned how to calculate reduce level of point from collected staff readings. From the calculated data students have prepared contour sheet.

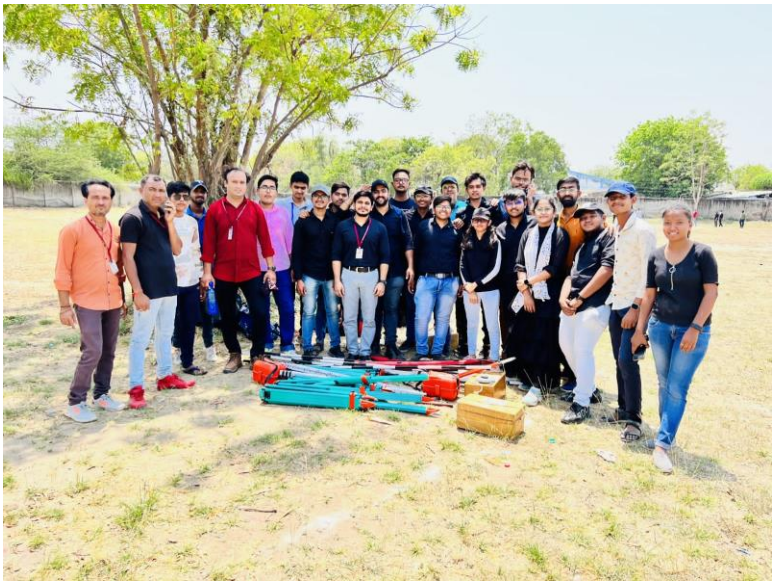
Photo Gallery:



Horizontal Angle Measurement



Students taking Staff Reading



Group Photo

Conclusion:

- Students learn how to calculate Reduce levels of various points establish on ground from collected staff readings.
- Students learn about the development of closed traverse from collected fore bearing and back bearing of line.
- Student prepared contour sheet from calculated reduce level, fore bearing & back bearing.
- Students were able to identify actual topographical condition of ground from prepared contour sheet.