

Title of PBL: Survey and Layout Preparation of new Parking Area of ITM University

Designed by -:

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1. Introduction

As part of the practical training curriculum, a group of students from the Department of Civil Engineering was assigned the task of surveying a newly designated area intended for the construction of a university parking facility. The objective was to conduct a complete field survey and prepare a detailed layout using AutoCAD software. This initiative provided students with valuable real-world experience and contributed directly to a significant campus development project.

2. Project Description

The students conducted a detailed topographic survey of the proposed parking area using standard surveying equipment such as total stations, theodolites, leveling instruments, and measuring tapes. The data collection focused on obtaining accurate measurements of distances, angles, elevations, and other relevant site features.

Following the field survey, the collected data was processed and analyzed. Using AutoCAD software, the students prepared a professional layout of the parking facility, which included the arrangement of parking slots, driveways, pedestrian walkways, drainage provisions, and accessibility features. The final map was submitted to the university authorities to aid in the actual construction planning of the parking area.

3. Methodology

The project was executed in the following phases:

- **Reconnaissance:** Initial site visit to understand the terrain, establish reference points, and plan the survey.
- **Field Data Collection:** Measurement of distances, elevations, and angles using surveying instruments.
- **Data Processing:** Compilation and verification of field data to ensure accuracy.

- **Layout Preparation:** Drafting of the complete parking layout in AutoCAD, adhering to standard drawing practices.
- **Submission:** Presentation of the final survey map to the university's project management team.

4. Learning Outcomes

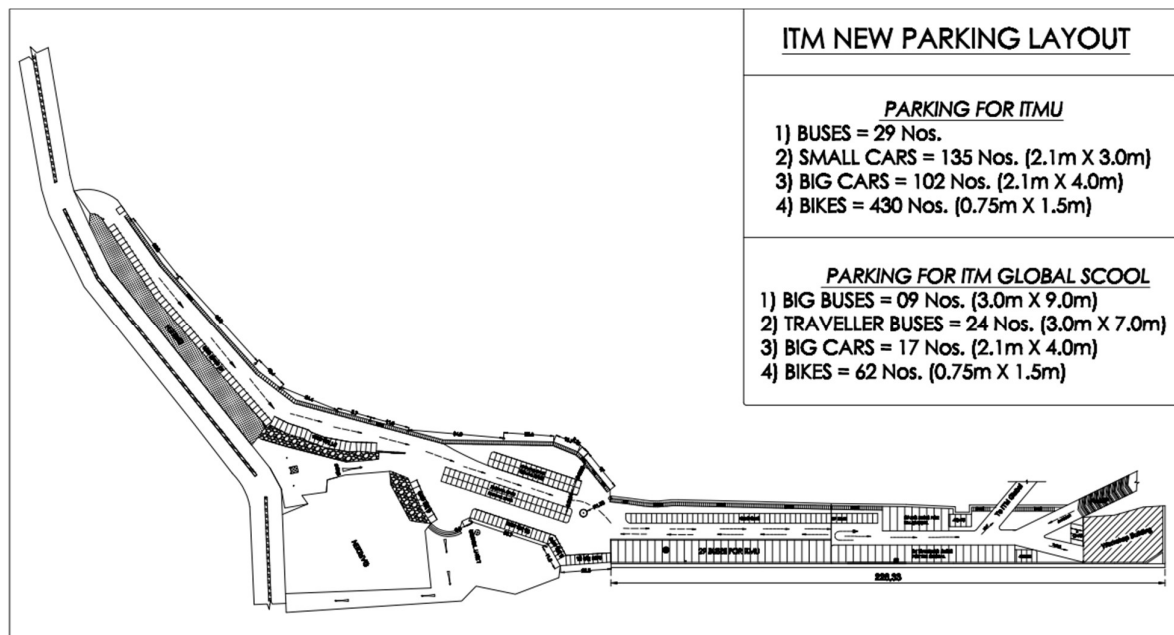
Upon completion of the project, students achieved the following outcomes:

- **Completion of Full Survey and Layout Preparation:**
Students successfully completed the end-to-end process of surveying and preparing the layout of a new parking facility.
- **Practical Exposure to Surveying Tools and Software:**
Students gained hands-on experience in operating various surveying instruments and learned how to translate field data into accurate digital layouts using AutoCAD.
- **Understanding of Surveying Elements and Procedures:**
Students developed a strong understanding of key surveying concepts, including field measurements, error adjustments, mapping, and layout planning.

5. Conclusion

The survey and layout preparation project proved to be an invaluable learning experience for the students. It provided them with a platform to apply their theoretical knowledge in a real-world scenario, enhancing both their technical skills and project management abilities. Furthermore, their contribution aided the university by supplying a professional layout for the new parking development.

Such initiatives bridge the gap between academic instruction and industry practice, preparing students to face real-world engineering challenges with greater confidence and competence.



Layout of New Parking Area