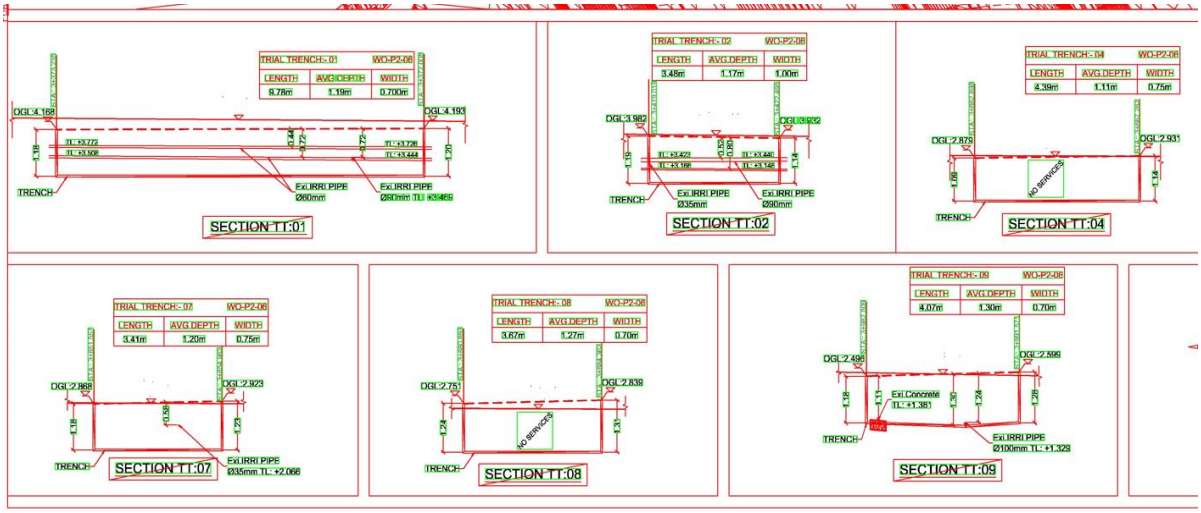
Work Experience on similar Projects

1. **Data Extraction using OCR**

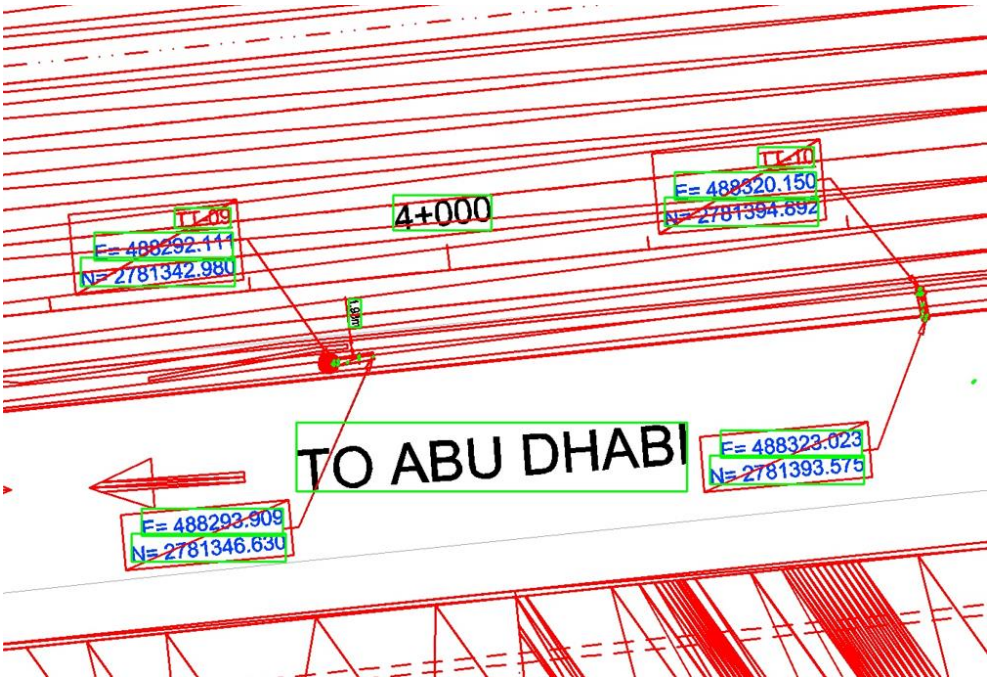
   In this project, we focused on automating the extraction of key data from construction floor plans. Specifically, we used **OCR (Optical Character Recognition)** to extract information on different types of pre-construction floor plan drawings and storing them in a structured format (GraphQL like database).

   We used **OpenCV** for image preprocessing (resizing, thresholding) and **EasyOCR** for OCR to accurately capture this data from labelled sections of the floor plans.

   - Extracting trial trench dimensions (length, width, and average depth).



   - Extracting the co-ordinates of the highway points and storing them into a structured format.



2. **Object Detection and Structured Data Extraction using YOLO**

In this project, we trained a **YOLO** model to detect key objects in construction floor plans, such as rooms, windows, walls, and other structural components. The image demonstrates object detection, where we successfully identified:

Rooms (e.g., BED 1, LIVING, KITCHEN)
Windows
Walls
Centroids of objects

Using **Python**, we extracted the detected data, structured it into a database, and later compared it with tabular data to ensure accuracy and consistency across the plan. This allowed for automated data extraction and validation for construction projects.