



Abstract

The project is developing a neighborhood north Medina at Saudi Arabia (Alzahra G) with a GPS location: (24°31'39.0"N 39°34'12.2"E). The collected data was survey data and traffic data. The design include 1 collector street, 42 local street, 1 signalized intersection and 41 unsignalized intersections.

Introduction

Objective

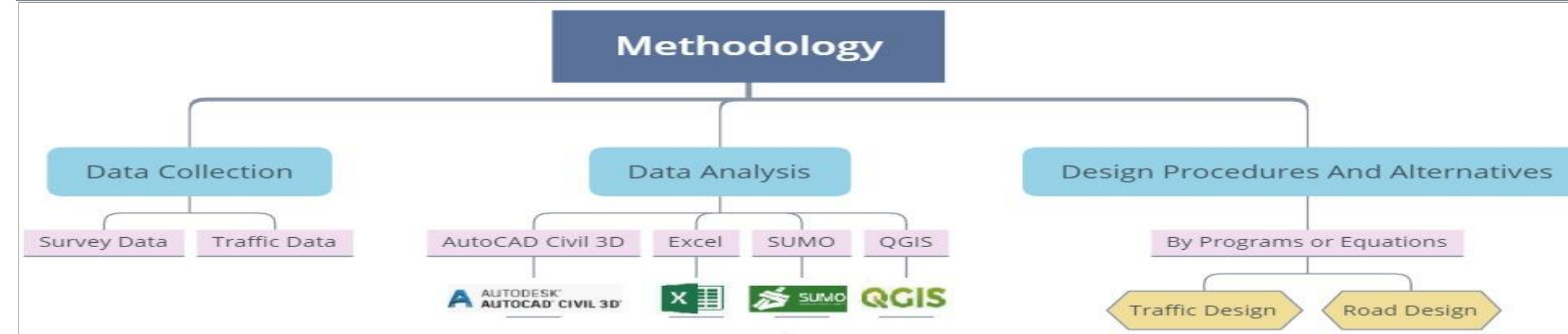
- Designing a safe desired for living neighborhood.
- Design according to standards.
- Guarantee safety for both vehicles and pedestrians.
- Increase mobility and accessibility for the block.

Site Description

- Area of block = 500000 m²
- Collector road length = 1500 m

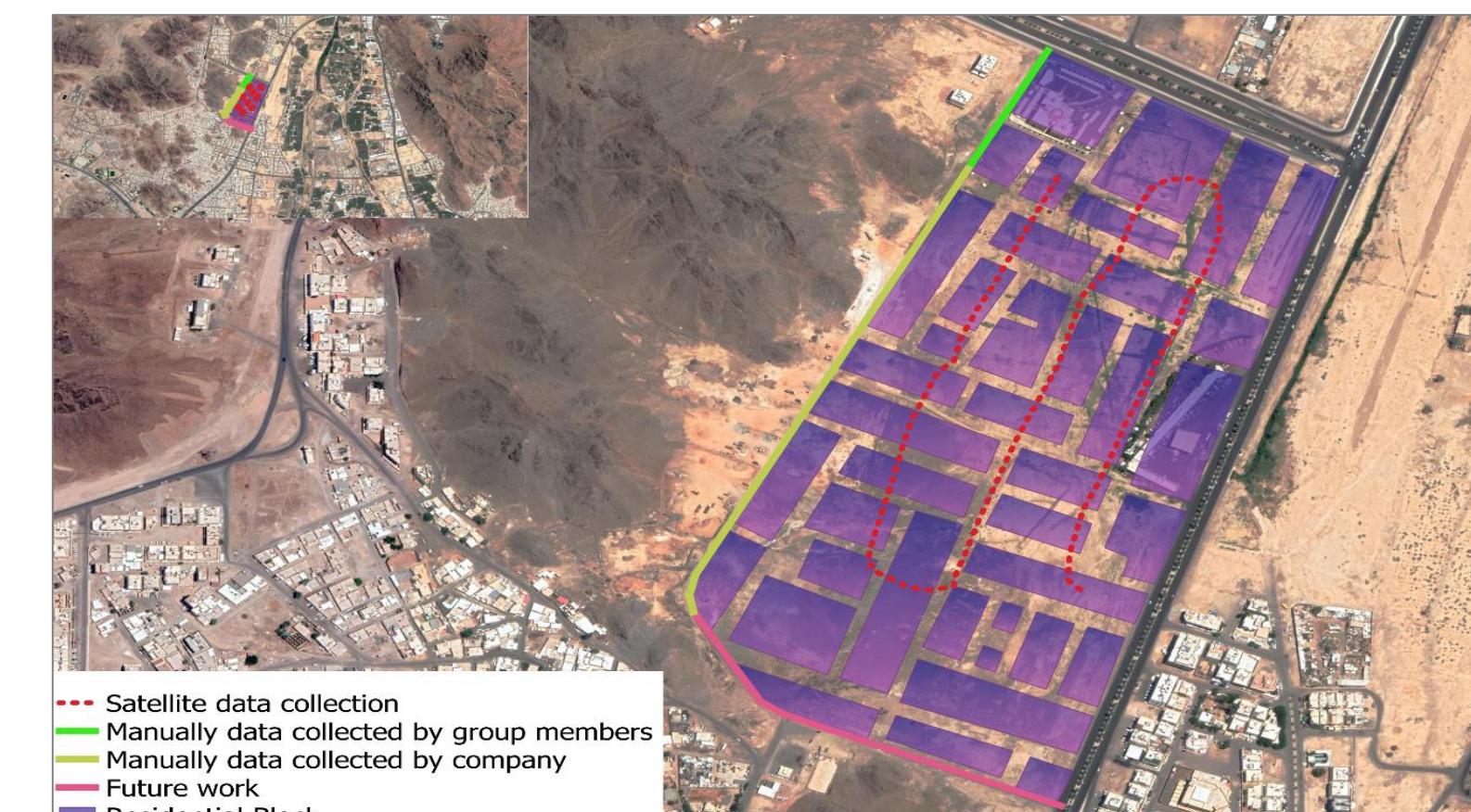
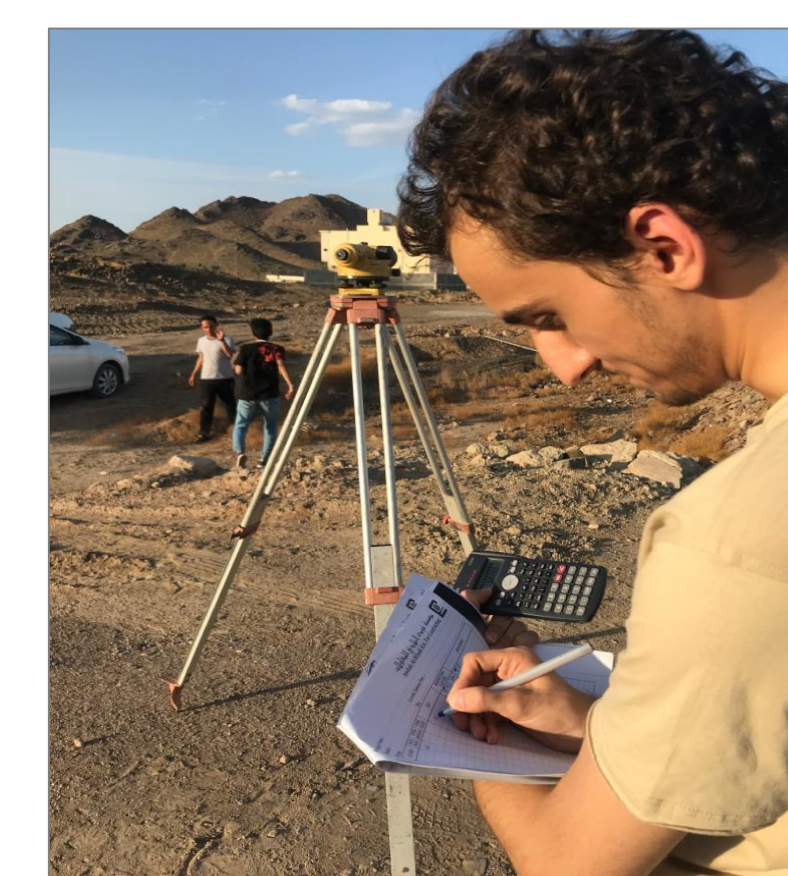


Methodology



Data Collection

- Survey data for block and collector street (25,000 points) by google earth and manual calibration.
- Traffic account for main streets affected by the study.



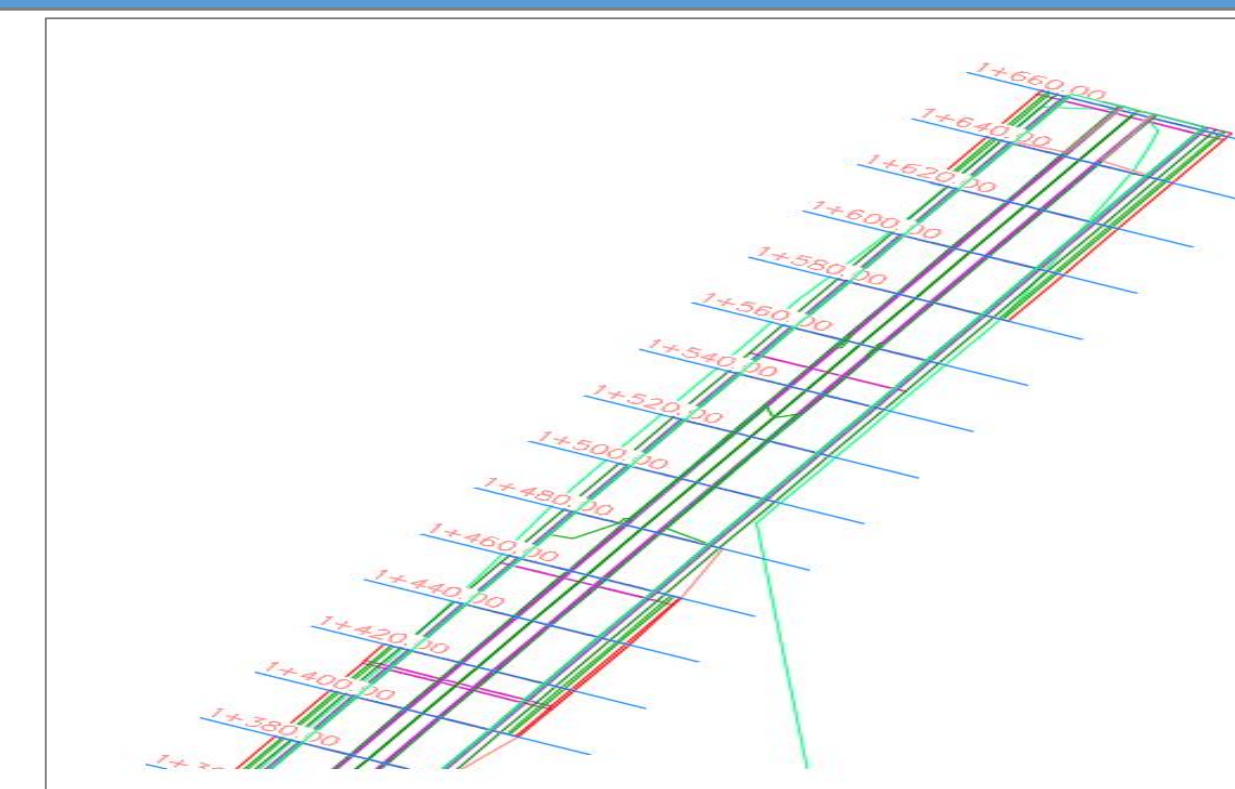
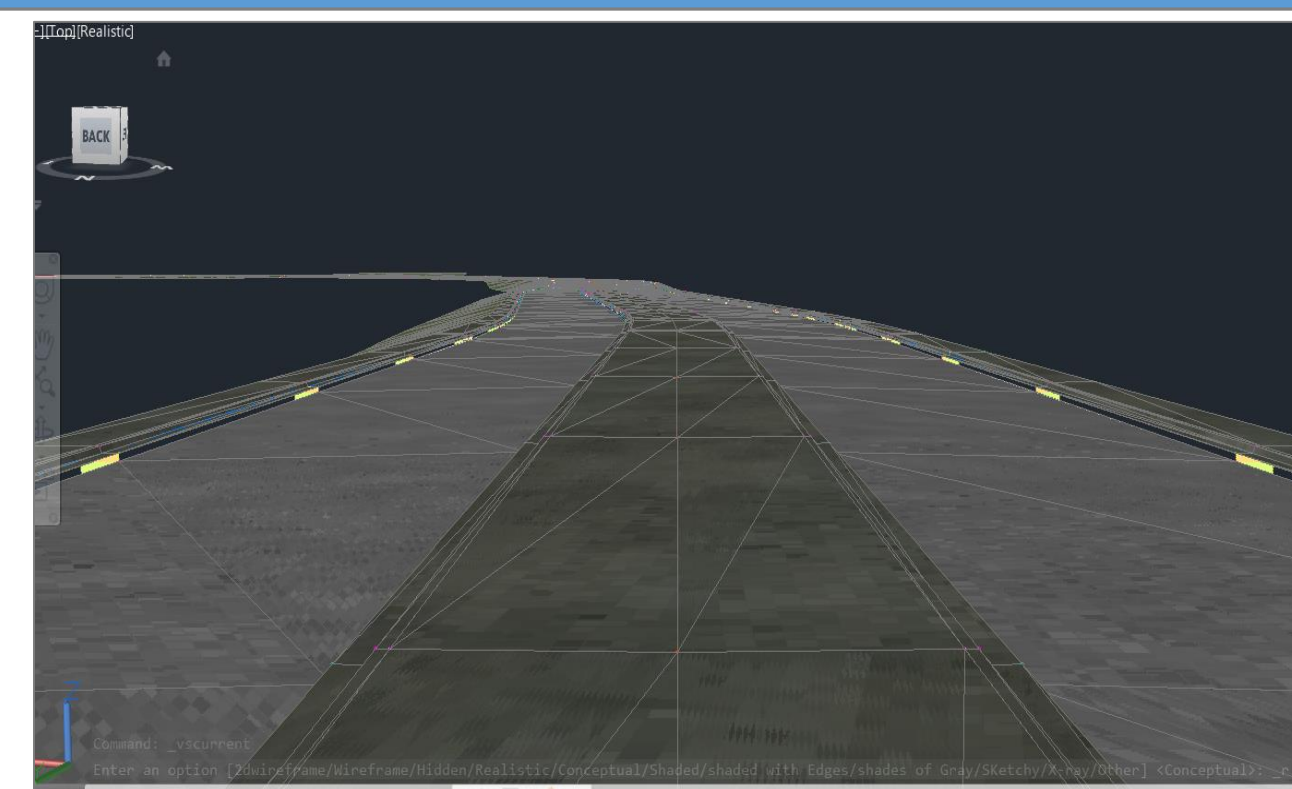
Data Analysis



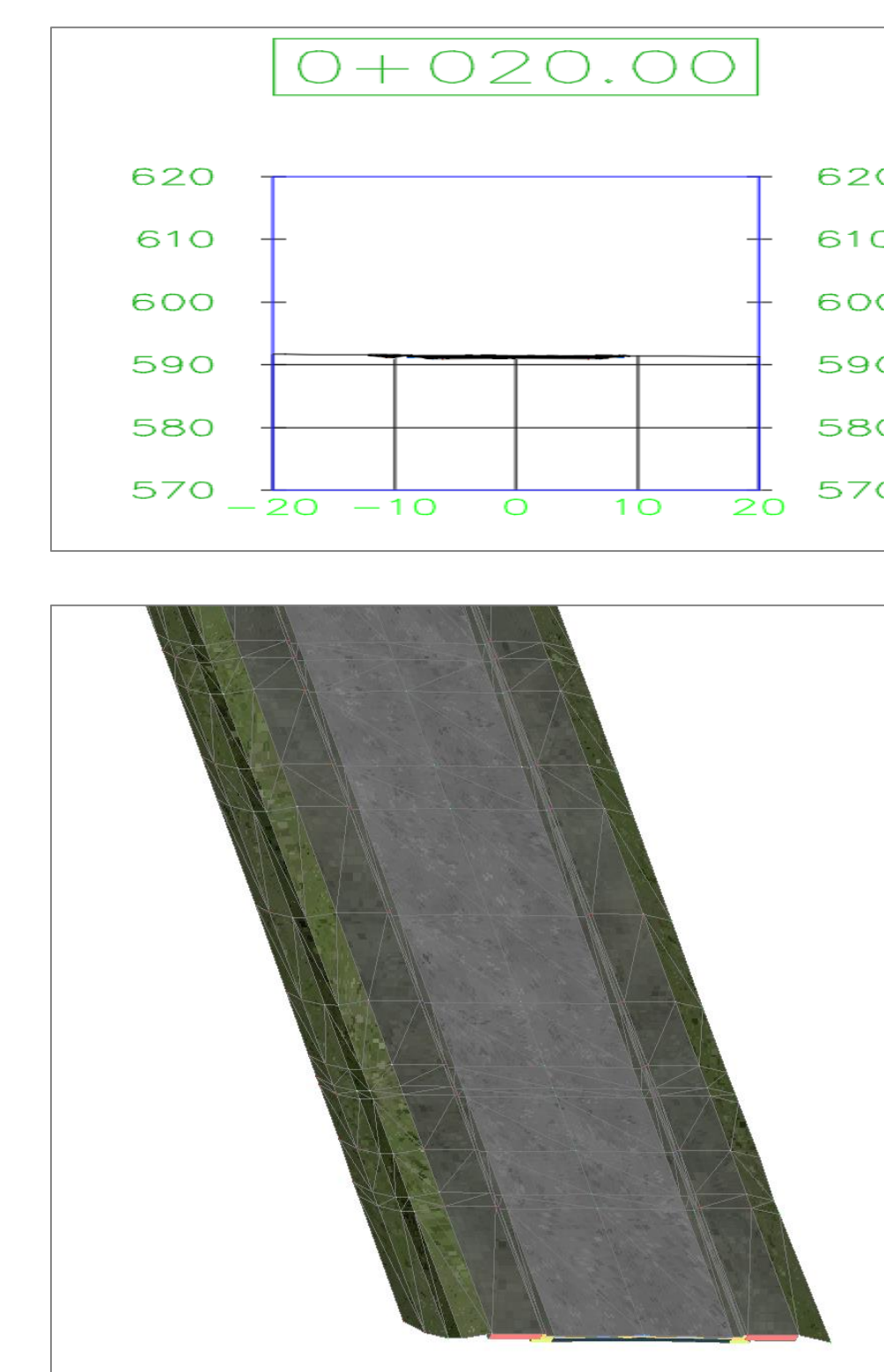
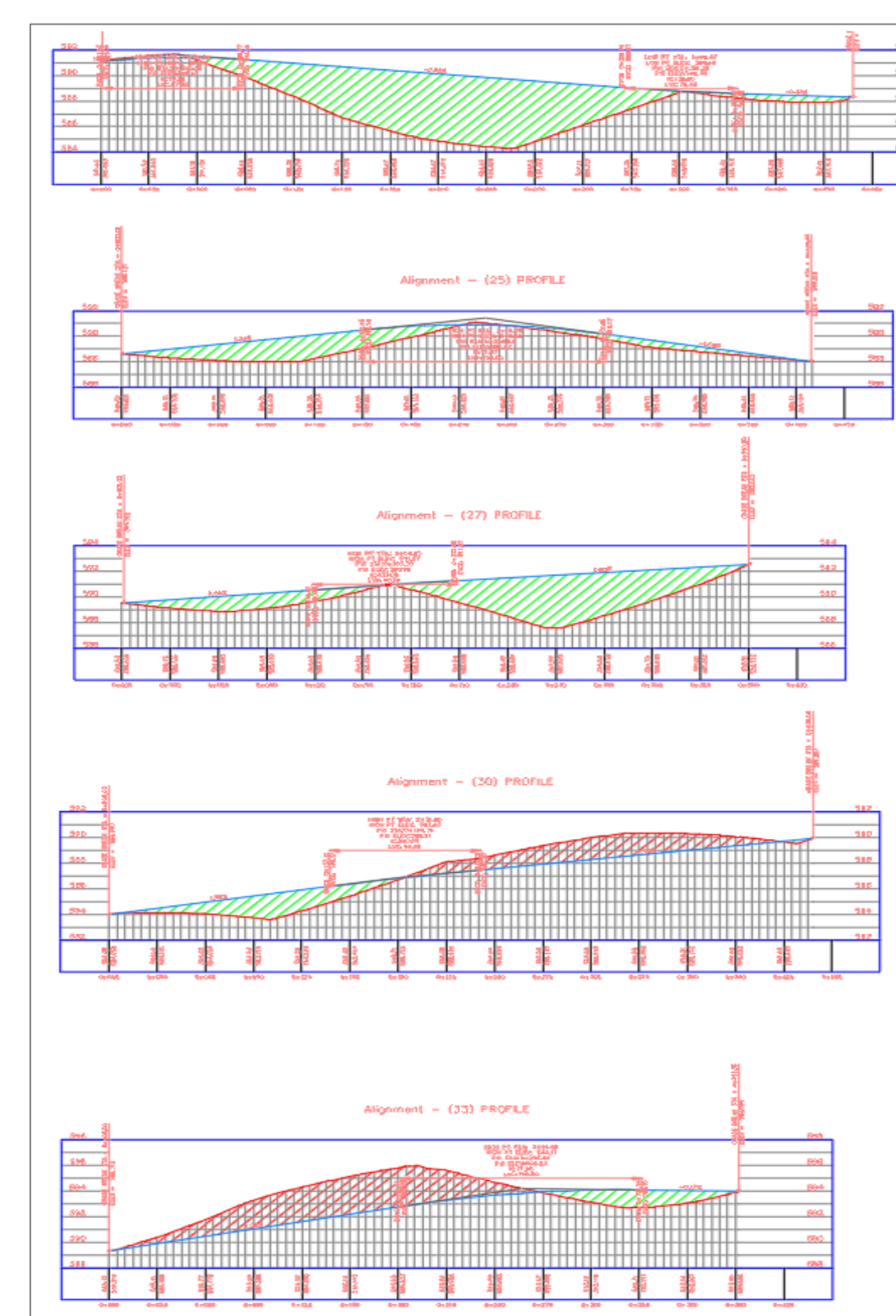
- By using: AutoCAD civil 3D, Excel and QGIS

Design

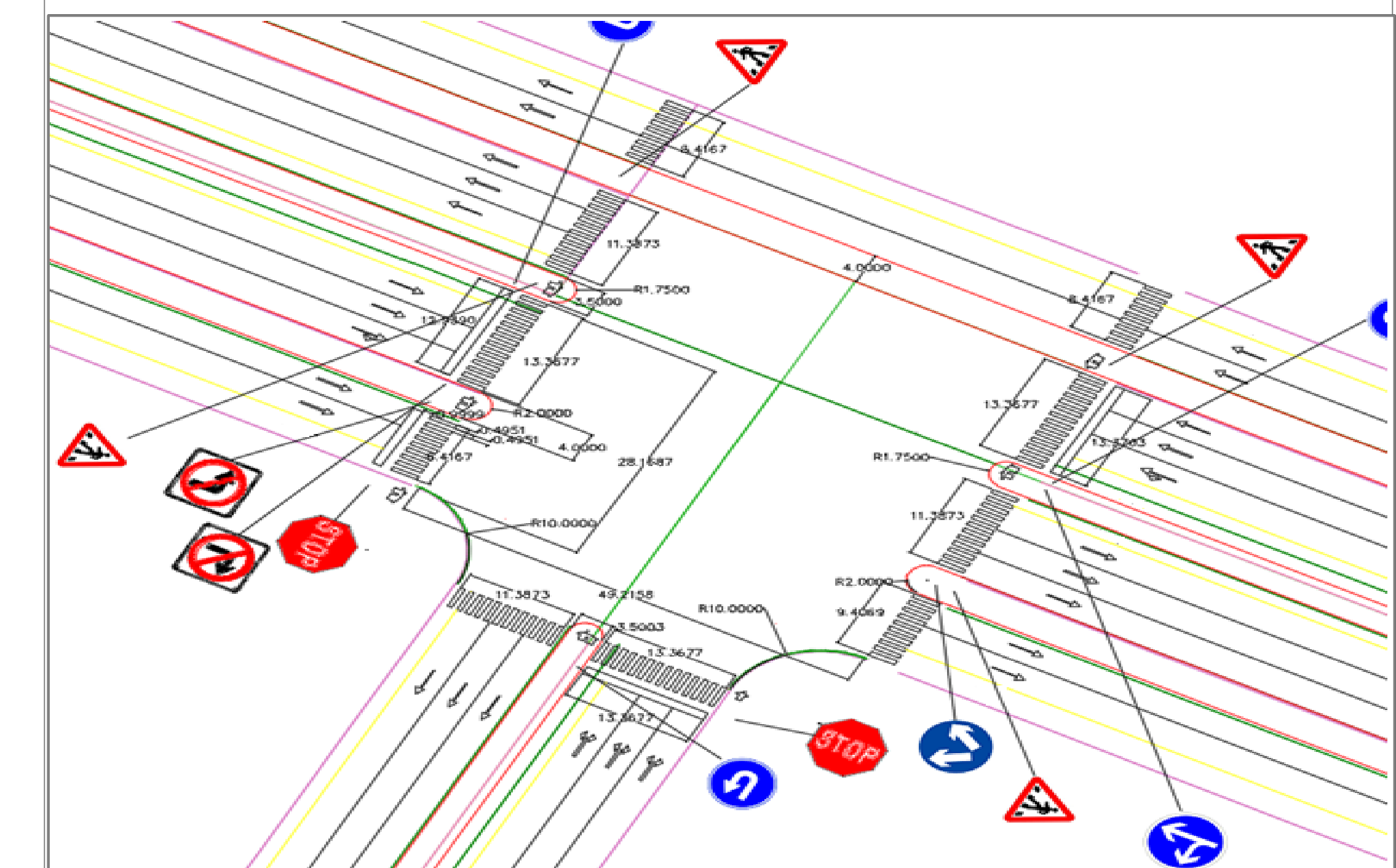
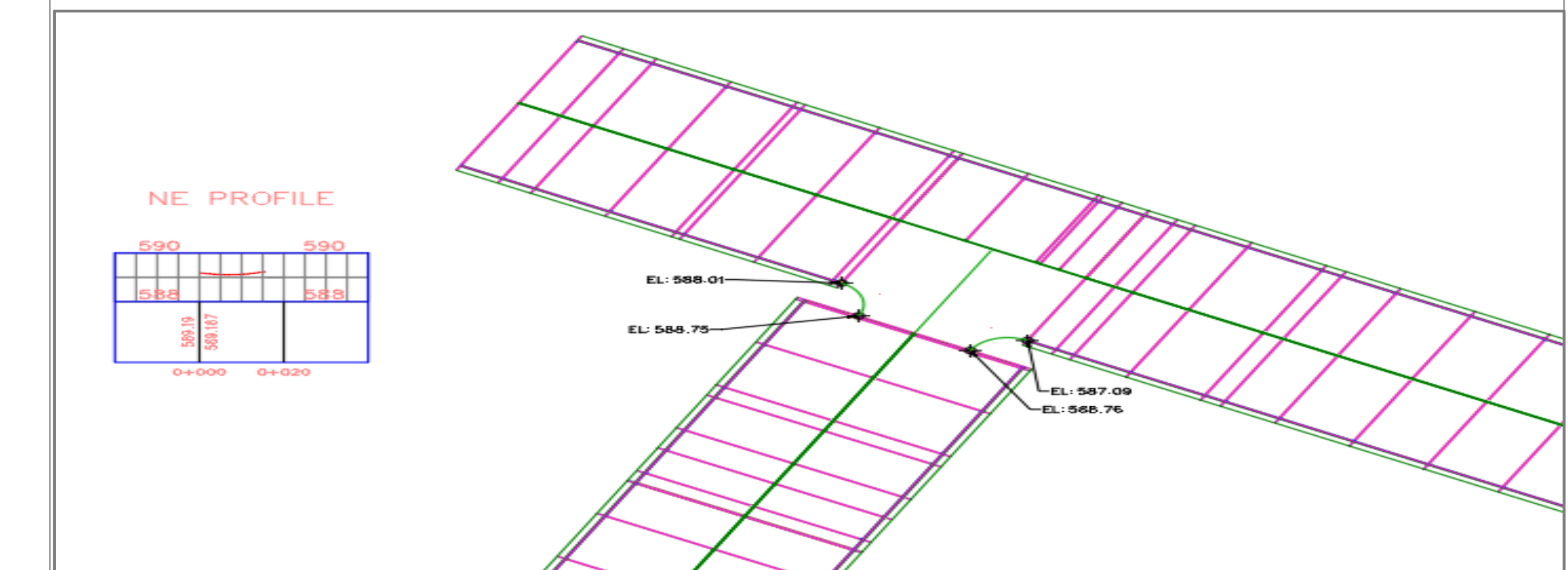
Collector Road



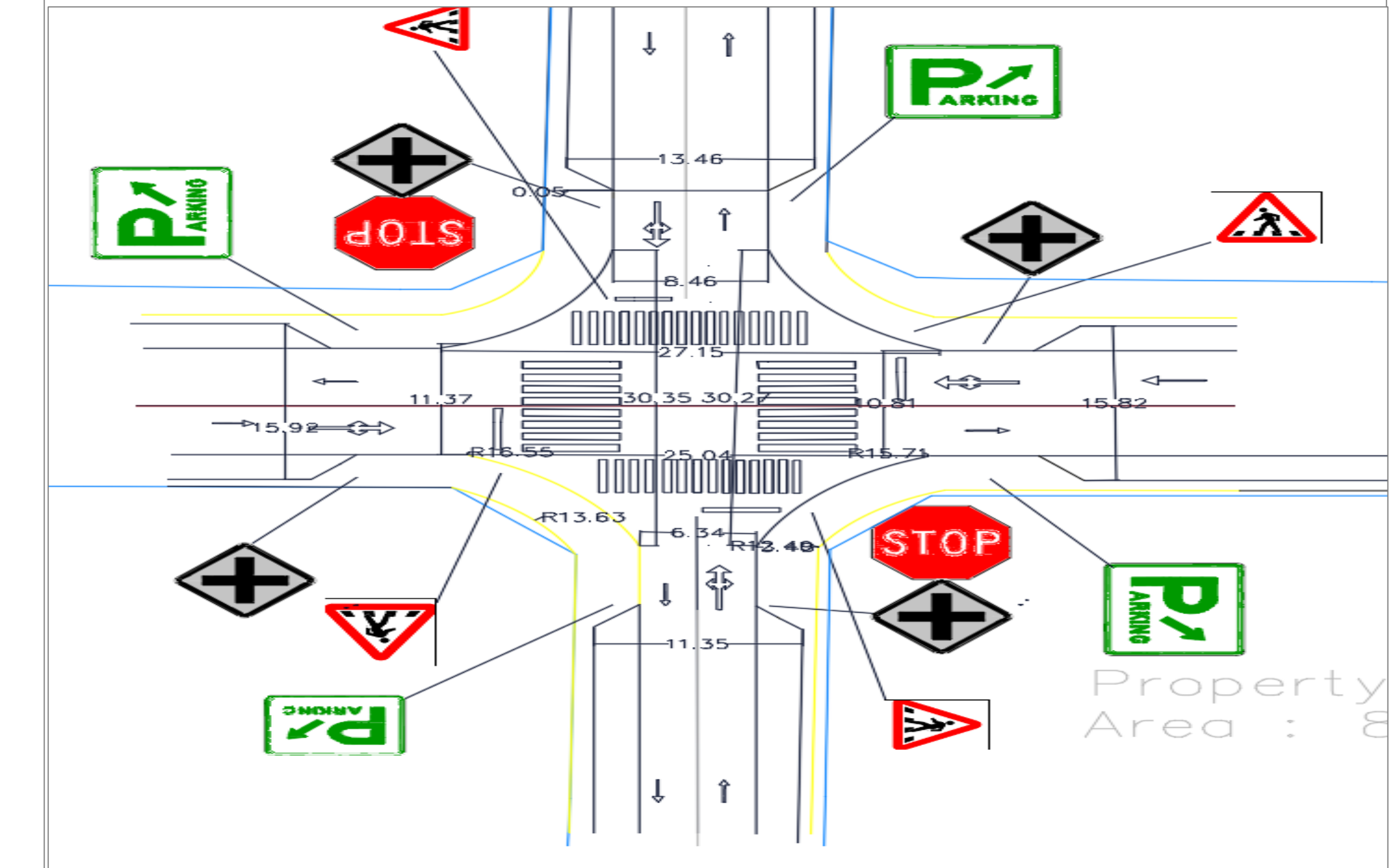
Block Design



Signalized Intersection Design



Unsignalized Intersection Design



Conclusion

Result

- Total cut = 13,000 m³
- Total Fill = 105,000 m³
- Collector road width = 30 m and length = 1500 m
- Unsignalized intersection: 1 unsymmetrical, 2 cross intersection and 38 T-intersections.