Transportation Division: Rick Engineering Company

RICK ENGINEERING COMPANY
Transportation Division

STEP Partnership of San Diego (SPSD)

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Introduction

Rick Engineering is a prominent Engineering firm with offices throughout California and parts of Arizona. Their mission is to provide for many aspects of the marketplace while staying ahead of the economy's exponential expansion. Rick Engineering's transportation division is one of the largest in the Southwestern United States.

My name is Miles Leandro and I am a Civil Engineer student at San Diego State University. I will graduate in December with an emphasis in Transportation Engineering. I was given the opportunity to intern at Rick Engineering where I assisted with the collection, supervision, and the reduction of intersection turning movements counts for the City of Carlsbad's annual traffic monitoring program.

Aim/Purpose of Goal

Each year, Rick Engineering Company prepares the City of Carlsbad annual traffic monitoring program report. As part of this, Rick Engineering provides students with a hands-on opportunity to collect data at multiple intersections around the city. This ultimately provides any new information Carlsbad needs to determine if any traffic development is necessary.

Method

- Conducted traffic counts for two 3 peak hour periods 3 days a week
- Conducted traffic counts at multiple intersections
- Supervised traffic count stations
- Performed data entry after data collection completion
- Analyzed lane geometries
- Took pictures of intersections to note changes

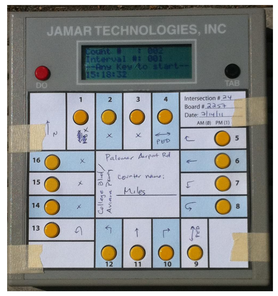
Miles Leandro, Intern at Rick Engineering, is doing a traffic count at one of the intersections in the City of Carlsbad

Actual picture taken to note any changes in intersection

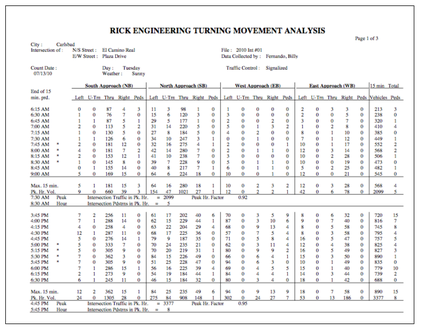
This is a view point of the common optimal view point for conducting traffic counts

Results

At the end of the five week traffic count period there is an analysis conducted based on the traffic data collected. This analysis is utilized to help determine if any traffic related improvements would be needed at any poorly operating intersections or roadways. Based on past years results the City of Carlsbad may choose to increase the number of lanes, allow for more options in a lane, change the phasing, cycle length, or signal timing. If the city does decide to change anything, it will allow for better traffic flow throughout the city.

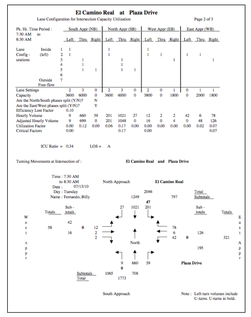


The piece of equipment featured on the left is the electronic count board used in the field to conduct traffic counts



RICK ENGINEERING TURNING MOVEMENT ANALYSIS

The above document is the turning movement spreadsheet conducted in Carlsbad in 2010



El Camino Real at Plaza Drive

Lane Configuration for Intersection Capacity Utilization

The document to the left is the visual document where the turning movements are displaued

Conclusion

Being given the opportunity to intern at Rick Engineering was a great experience. I was able to use my classroom knowledge out in the field for the first time. I was able to do so by studying the signal timing and turning movements at multiple locations while conducting traffic counts. This gave me many skills in traffic monitoring such as counting, data entry and analysis. The experience that I received through this internship will carry over into the future as I move forward in getting my degree and obtaining a career.

Acknowledgements

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