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Gaining Wait? Analyzing the Congestion Impacts of Road Diets in Los Angeles

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Research Topic

A key piece of the Los Angeles Vision Zero plan involves installing so-called “road diets” on some of the city’s especially dangerous streets. This process involves removing through traffic lanes and adding turning and bike lanes to reduce collisions from vehicle turning and lane changes, to improve pedestrian and bicycle infrastructure, and to “calm” high-speed traffic by reducing vehicle speeds. These road diets have proven effective at improving safety outcomes in Los Angeles, but claims of increased congestion and terrible traffic along the reconfigured roads have prompted public outcry, recall campaigns and even lawsuits against the city.

For this brief, the researcher performed a study of congestion on road diet corridors before and after travel lanes were removed. In particular, the researcher examined four case studies of road diet corridors and a total of six respective parallel control corridors to estimate changes in traffic flow and congestion along these routes after the lane configuration changes were made.

Main Findings

- In aggregate, the four road diet corridors examined showed an 8-percent increase in traffic volumes. Average daily traffic (ADT) counts across all four case studies increased from 15,333 vehicles pre-installation of their respective road diets to 16,597 vehicles after installation.
- Traffic volumes on the six parallel control corridors showed a very slight decline in aggregate, dropping from an ADT of 17,605 to 17,494 post-installation. This represents a drop of 0.6 percent.
- Observations of traffic flow revealed very little delay or congestion at any of the representative intersections during peak travel times. The lowest Level of Service calculation across all intersections included in the study was a D Level, which is widely seen by traffic engineers as acceptable performance for an urban road during peak hours.
- Data regarding traffic volumes, speeds and queuing is publicly available, creating an opportunity for transportation departments to offer further analysis about the performance of road diet conversions.

KEY TAKEAWAYS

- The potential safety benefits of road diets are quite large and well documented, but impacts of travel lane removal on congestion have not been widely studied.
- Removing travel lanes from a road does not necessarily reduce the road’s capacity to process traffic — in some cases a road may move more vehicles at similar service levels.
- Limited public data makes studying historical changes in congestion difficult. Cities should work to improve transparency and performance reporting, especially around major road reconfiguration projects.

Study

The research for this study consisted of an analysis of the average daily traffic (ADT) count data made publicly available by the Los Angeles Department of Transportation. In addition to comparing traffic volumes before and after road diet implementation, the researcher observed current conditions of intersections within the road diet and comparison corridors. These assessments of current conditions provide peak-hour traffic volume and movement in the case study corridors.

Recommendations

- Road diet conversions can allow streets to still process high volumes of traffic without causing significant peak-hour delays for motorists.
- Transportation departments should collect ample road performance data before and after road diets are implemented to better understand what changes have the most impact in reducing congestion and traffic volumes.
- Local transportation agencies should make readily available traffic data and analyses to show successes and challenges for specific projects.

For More Information

Jouliot, D. (2018). *Gaining wait? Analyzing the congestion impacts of road diets in Los Angeles* (Masters capstone, UCLA). Retrieved from <https://drive.google.com/file/d/1zheqiaXbb12yP28U5NqdHTVQ7tBUf8e-/view>

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