

Complex
Concepts
Understood

CONSIDERING A ROAD DIET

AN eBOOK BY RYAN HUGHES, P.E.

Clark>Dietz

Engineering Quality of Life®

what's a road diet?

a reduction in travel lanes combined with a reallocation of space to other modes or uses.

Safe streets for all users

Road diets allow agencies to redistribute some of the area designated for automobiles to other users. This can create a more equitable transportation system because people who walk, bike, or ride transit are given more consideration in the design process. With that said, designers understand that road diets cannot simply be applied to every street in the urban network. Certain considerations need to be made to ensure a road diet will operate effectively, as you will see in this eBook. However, certain streets, especially those that were constructed during the automobile boom of the 20th century, are ripe for a trimming. This can bring about many safety, operational, and economic benefits to a community. After learning about the road diet work we completed for New Albany, IN, you are welcome to begin exploring what a road diet might mean for your community.

There's a
19
to **47**
%

reduction in overall crashes when a Road Diet is installed on a previously four-lane undivided facility. We know - it's pretty awesome.



Case Study:

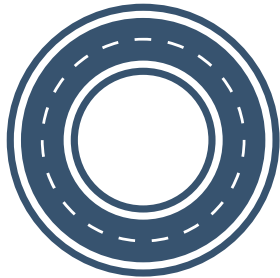
Spring Street & Silver Street Intersection Improvements New Albany, IN

The segment of Spring Street from Vincennes Street to Beharrell Avenue was a four-lane arterial with a large volume of pedestrians and a high vehicular accident rate that served as Downtown New Albany's only crossing of Silver Creek to neighboring Clarksville. Clark Dietz assisted the City in evaluating safety improvement concepts for the corridor and applied for funds from the Federal Highway Safety Improvement Program (HSIP). The project was selected to receive 90% funding through the HSIP program and Clark Dietz was selected to provide design services to implement a road diet on the corridor. The final design consisted of a **reduced number of travel lanes, reduced lane widths, a center two-way left turn lane, buffered bike lanes, pavement patching and overlay, high visibility bike lane and pedestrian markings & new traffic and pedestrian signals.**



Concepts for New Albany

Clark Dietz worked with the City of New Albany to develop safety improvement concepts for the road diet in this corridor. Developed concepts included:



Evaluate a roundabout for the intersection of Spring Street and Beharrell Avenue



Add left turn lanes on Spring Street at the Silver Street intersection with improved signal installation



Convert Spring Street to a three-lane section, with bike lanes, from Vincennes to Silver



Restrict the width of the through lanes west of Silver Street and add a raised pedestrian refuge median

In the end, Clark Dietz developed funding applications for the proposed improvements and helped the City **obtain HSIP funding**. This road diet in particular has proven effective on a street with a traffic volume just above the maximum recommended average daily traffic (ADT) of 20,000 vehicles.

ClarkDietz Planning Process

Here's what we'll ask you when considering a road diet application.



Use the next two pages to start thinking about how this applies to your potential project needs. By beginning to answer these questions, you'll be able to determine if a road diet is right for your community.

1 Understanding context

How was the idea for a road diet introduced?

How does this corridor currently operate?

2 Identifying client goals

What are you hoping to accomplish by evaluating this corridor?

How do you define a successful road diet for this street?



3 Understanding users and community needs

How does the community perceive this street?

What are their concerns with its operation right now?

4 Evaluating the proposed reconfiguration

What are the critical performance metrics to evaluate?

5 Designing the final solution

What do you want to do with the extra space from the road diet?

considerations



Impact on vehicle delay



Intersection performance



Transit facilities and needs



Freight/delivery truck percentages

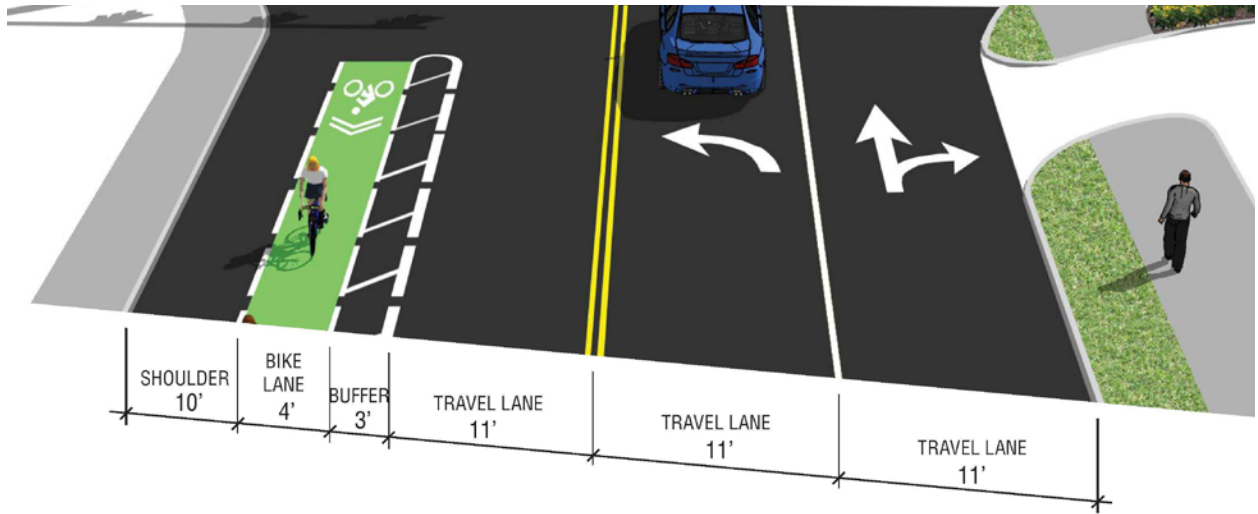
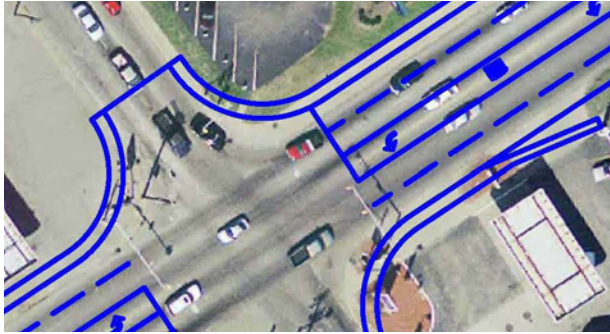


Bicycle network connections



Percent of left-turning vehicles





Still considering a road diet?

Now that you've got some ideas down, I hope it's helped bring you closer to determining whether or not a road diet makes sense for the corridor you are considering. Our case study is just one example of how innovative and efficient transportation design can transform communities.

Clark Dietz has roots in a college town which has grown our knowledge in multimodal needs for decades. Not only that, we have a passion for designing streets with all users in mind. Implementing a road diet can be a complex process to navigate, but we're here for you. Clark Dietz is excited to see how a road diet transformation can be used in your community to improve the quality of life of all users.





About the Author

RYAN HUGHES, PE

Mr. Hughes' experience with transportation planning and engineering includes micro and macro level traffic modeling, modal conflict analysis of city-wide transportation systems, urban roadway design, bicycle and pedestrian street design, and roundabout design and analysis. Mr. Hughes also has experience overseeing roadway construction and water main installation. Ryan is proficient in ArcGIS, Microstation/Geopak, Synchro, and Rodel.

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