

Chapter 9 – Congestion Management

The DMPO recognizes the value in understanding how project development impacts congestion/delay time. This brief analysis identifies some of the impacts associated with congestion.

There are many ways to describe congestion on a transportation network. For this plan, the total vehicle hours were compared on the entire transportation system in the model year 2040 in both the build (meaning all potential projects have been constructed) and no-build (meaning no potential projects have been constructed) scenarios. A reduction in congestion is realized by building the projects shown in the 'Projects & Phasing list' in Chapter 6 and illustrated in the "Network Travel Time" chart.

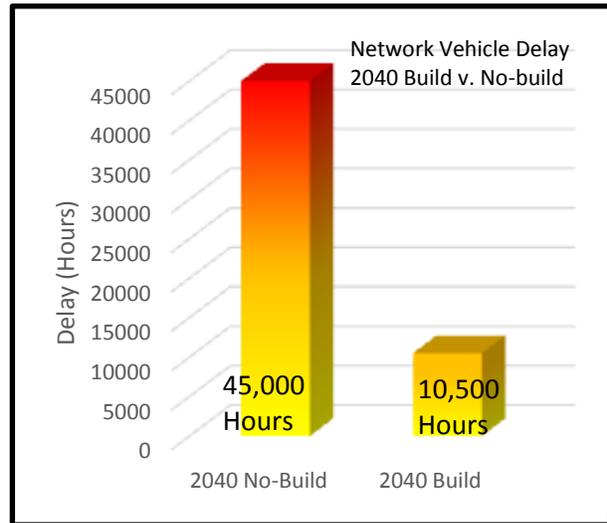


Figure 1: Network Travel time

The "Network Vehicle Delay" chart compares total network travel time per day in year 2040 for the build v. no-build alternatives. There will be 45,000 delay hours per day in the no-build scenario where current capacities are maintained but not expanded. This is compared to the 10,500 vehicle hours if all the projects are built. Thus the build scenario represents a total savings of 34,500 hours per day leading up to and beyond 2040.

The 2040 Daily Travel Times shown in Table 9, assumes a snapshot in time in 2040. It shows a No Build scenario resulting in 264,905 daily network travel time hours, or an 11% increase in hours above the Build scenario of 236,795 hours of daily travel time.

The "Cost Benefit Analysis" table, Table 11, shows the total time saved (in hours) of the build scenario, (building all projects in the long range plan) over the 25-year plan time period. It assumes two scenarios, hourly delay cost of \$20 and of \$30, with both showing a positive ratio over 1.0: 1.87 at \$20 and 2.80 at \$30

In summary, managing congestion on a network with limited capacity growth due to topography constraints puts heavy pressure on decision makers to make every attempt to implement the projects in this plan to serve the population and travel demand expected in year 2040. The mix of highway, public and private transit, and bicycle pedestrian facilities will help maintain the quality of life and economic growth of Utah's Dixie.

Table 9 - Daily Travel Times

2040 Daily Network	
Condition	Travel Time (hours)

No Build	264,905
Build	236,795

Table 11 – 25-Year Cost Benefit Analysis

Total Time Saved (hrs)	Cost Benefit (\$20/Hr)	Cost Benefit (\$30/Hr)	Total Estimated Roadway Improvement Cost	Cost to Benefit Ratio (\$20/hr)	Cost to Benefit Ratio (\$30/hr)
164,350,000	\$3,287,000,000	\$4,930,500,000	\$1,761,710,000	1.87	2.80

Objectives and Goals

With these factors in mind, the Dixie MPO recognizes the potential for extreme traffic congestion and will strive to support congestion reducing efforts.

Objective

The Dixie MPO will encourage the reduction and management of traffic congestion through the implementation of useful transportation tools as well as construction of appropriate infrastructure.

Goals

1. Support the use of transportation tools including ITS Message Boards, the Traffic Control Center (TOC), Traffic Management efforts, Ramp Metering, Reversible Lanes, Cross-over left turn lanes and other state of the art tools.
2. Support the use of appropriate Transit Projects including the implementation of a Bus Rapid Transit (BRT) line.
3. Support the funding and construction of Transportation infrastructure projects aimed at reducing congestion.
4. Encourage and recommend congestion reducing tools in each new project.
5. Use the Travel Demand Model to identify congestion delay and measure the reduction progress.