**Do Bicycles Reduce Passenger Car Travel Speeds on Urban Roads without Bicycle Lanes? Evidence from Roadways in Portland**

**Background**

Additional bikeways will be needed to accommodate larger volumes of bicycles as cities seek to expand their bicycle mode share. Shared-use roads can be a safe and economical solution to this growing demand. Bikeway design guidance recommends shared roads may be appropriate for low traffic volumes and speeds.

**Results of a simulated traffic study have raised concerns that increased bicycle volumes will impede motor vehicle volumes and speeds.**

*Key Findings*

- Statistically significant differences in speed were found to be negligible from a practical perspective, on the order of one mile per hour or less in most instances (TABLE 2).
- A difference of approximately 3 mph was seen at one location serving traffic volumes well in excess of the recommended 2500 ADT for shared roads.
- Peak hour t-test results and the 95% confidence intervals did not support the statistically significant results of the 24-hour period t-tests.
- Scatterplots and correlation coefficients close to zero indicated the absence of a relationship between gap time and speed for both traffic scenarios at all sites.
- Double yellow lines may inhibit overtaking behavior.
- High occupancy of street parking removes effective width for passing and may contribute to minor differences in speeds.
- The magnitude of speed differences was smaller at locations where shawrows were present.

**Conclusion**

The results of this research indicate that bicycles do NOT reduce passenger car speeds by a practically significant amount provided the recommended bikeway design parameters are followed.