UNR facility, students and government staff work together...

Retimed Signals at I-80 eases driver's frustration thanks to combined efforts

RENO, NV- Traffic flow at the retimed I-80 interchange in downtown Reno is moving better thanks to the work of a University of Nevada Reno professor, his students, the City of Reno and the Regional Transportation Commission (RTC). A network of six traffic signals at the busy downtown interchange has been retimed through a cooperative effort which helped ease congestion and back-ups for motorists while providing students real-life experience. "It's the best of all worlds," says Greg Krause, RTC Executive Director, "students learn and see tangible results of their education, the community benefits with better traffic flow and government is more efficient through combined effort."

Dr. Zong Tian, a UNR Engineering professor, was convinced that the six signals defined by Sierra, Virginia, and Center, intersected by the I-80 westbound ramp (8th St.) and the I-80 eastbound ramp (Maple St.) could work better. He and his students came up with a scheme that made the six independent traffic signals work together like the traffic engineering concept of three diamond interchanges.

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In other words, some increased delay on the outside of the network was conceded in exchange for fewer stops on the inside. Simply put, drivers wait for an extra ten seconds or so on Virginia and are rewarded with a green on the other side of the intersection.

RTC Project Manager Jim Poston explains, "At most traffic signals in the Truckee Meadows optical and electrical detectors monitor vehicle movements. They try to allocate green in the most efficient manner. When vehicles are no longer detected in an intersection the green is given up to another direction of traffic. But if signals are closely spaced (as at this downtown intersection) getting started earlier might be useless because there’s nowhere to go except through the next signal."

The new engineering scheme artificially holds traffic until the downstream signal is ready for it. This causes minor delay for traffic initially but avoids additional stops. Even turning traffic movements can be anticipated downstream or at the other signals. Every direction cannot be expedited in this way, but the most frequent movements can (there are 18 primary movements through the interchange) and 13 of the paths are accommodated.

This effort is part of the Regional Traffic Signal Operations Improvement project. There are 165 intersections in the project across the Truckee Meadows.

The RTC is your regional public agency responsible all aspects of transportation in the Truckee Meadows. Offices of the RTC are located at 2050 Villanova Dr. in Reno. The telephone number is 348-0400.

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