The Southwestern Pennsylvania Commission’s (SPC) Regional Traffic Signal Program was established to assist local municipalities with improving traffic signal operations by optimizing signal timings and upgrading existing signal equipment. The City of Washington Main Street Signals In Coordination with Equipment Upgrades (SINC-UP) Project is a signal equipment upgrade and retiming project with the goal of optimizing signal operations at intersections along the Main Street corridor while considering all users of the intersections [See map below for project area].

Traffic Signal Coordination:
- Improves safety because vehicles stop less often, which reduces the probability for rear-end crashes
- Benefits the environment by reducing vehicle emissions
- Reduces travel costs by reducing the amount of time stopped at red lights
- Saves money at the gas station by reducing fuel consumption

As part of this project, intersections received accessible pedestrian push buttons and LED pedestrian countdown signals to improve pedestrian safety. Global Positioning Satellite Antenna and Receivers were installed at the intersections to allow for time-based coordination during majority of the weekday and midday Saturday. Coordination of traffic signals is one of the most cost effective ways of improving traffic flow along a corridor.
Travel Improvements:
The results showed that on average, travel time and stops improved 17% and 30% respectively throughout the peaks. During the midday peak, northbound Main Street travel time improves by nearly 35% with the number of stops cut in half.

Summary of First Year Benefits**

- Reduced Vehicle Hours of Travel: 8,943
- Reduced Fuel Consumption: 10,994 gallons
- Reduced Total Pollutant Emissions: 1,010 kg
- Reduced Number of Stops: 806,218
- Total Benefit: $203,101
- Benefit Cost Ratio: 4:1

Prior to this SINC-UP Project, motorists typically experienced moderate delays and the frustration of consecutive stopping at traffic signals. This retiming project coordinated the traffic patterns among these intersections which alleviated consecutive stopping and reduced the motorist’s frustration.

https://www.spcregion.org/trans_ops_traff_vids3.asp

6,200 vehicles travel this corridor on an average day