



# Ellwood City Lawrence Avenue and Fountain Avenue (SINC-UP) Project Summary

## REGIONAL TRAFFIC SIGNAL PROGRAM CYCLE 3

### PROJECT LOCATION

Lawrence County



### SOUTHWESTERN PENNSYLVANIA COMMISSION

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### PROJECT PARTNERS

Federal Highway Administration  
Pennsylvania Department of Transportation, District 11-0  
Lawrence County  
Ellwood City  
Whitman, Requardt & Associates, LLP

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 Ellwood City Signals In Coordination with Equipment Upgrades (SINC-UP) Project** is a traffic signal project with the goal of optimizing signal operations at intersections along the Lawrence Ave and Fountain Ave corridors while considering all users of the intersections [See map below for project area].

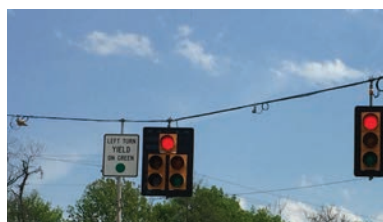


- |                         |                         |                           |
|-------------------------|-------------------------|---------------------------|
| 1 Lawrence Ave & 9th St | 4 Lawrence Ave & 6th St | 7 Fountain Ave & 5th St   |
| 2 Lawrence Ave & 8th St | 5 Lawrence Ave & 5th St | 8 Fountain Ave & 2nd St   |
| 3 Lawrence Ave & 7th St | 6 Spring Ave & 5th St   | 9 Fountain Ave & Sims St  |
|                         |                         | 10 Pershing St & Line Ave |

Corridor Length: Approx. 1.00 mile

### 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, many intersections received controller software upgrades and controller conduit elbows. The project also installed a new Type 170 controller assembly and electrical service at another intersection and a new Econolite controller and emergency vehicle preemption at another intersection.



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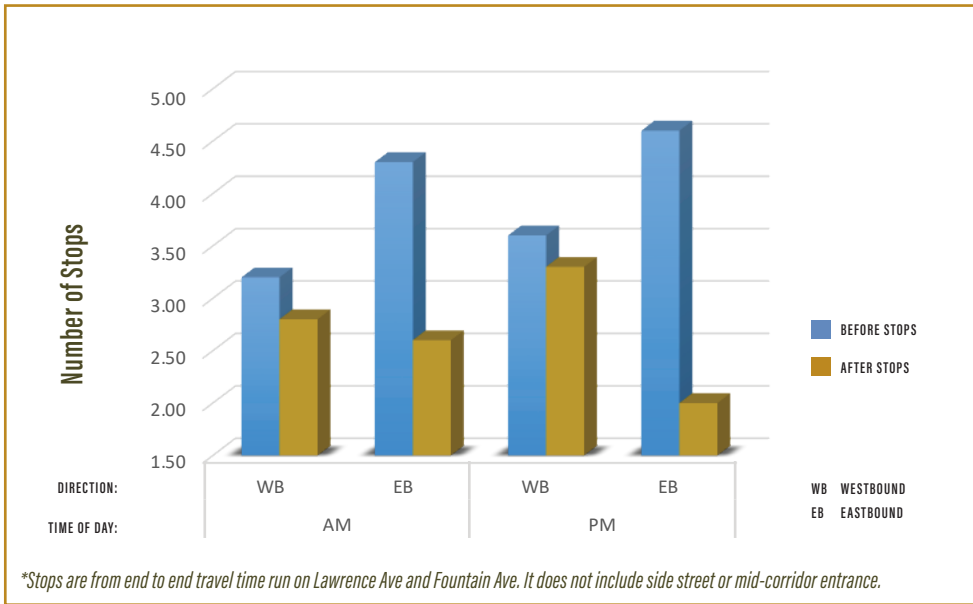
## Travel Improvements:

The results showed that the average travel time improved by 20%. The average number of vehicular stops decreased by 30%.

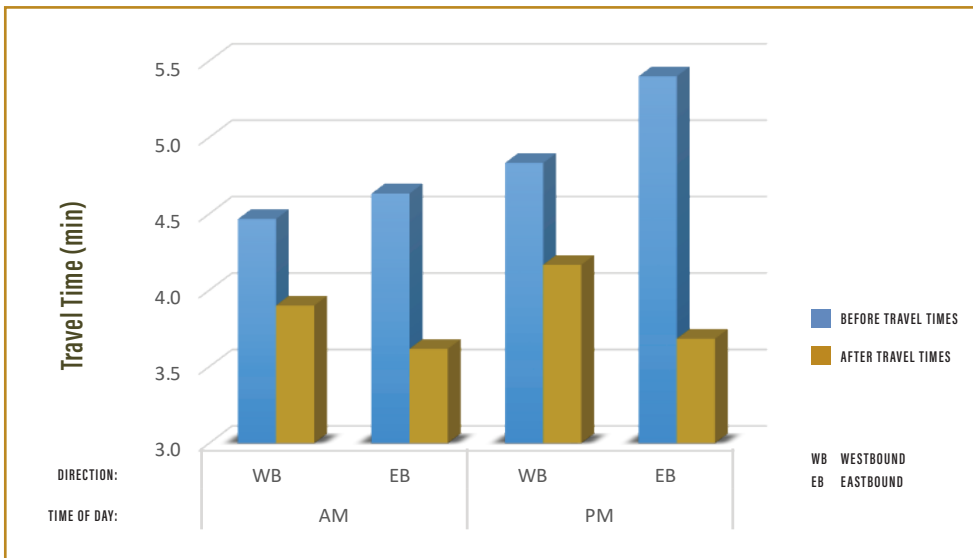


7,000 to 8,600 vehicles travel this corridor on an average day

Number of Stops\*: Before and After Comparison



Travel Time: Before and After Comparison



This corridor was coordinated prior to this SINC-UP Project, however the exclusive pedestrian phases along Lawrence Ave had insufficient pedestrian intervals. This retiming project refined the coordination along the corridor while bringing all of the pedestrian, clearance and change intervals up to the current industry standards.

## Summary of First Year Benefits

45,240



Reduced Vehicle Hours of Travel

42,736 gallons



Reduced Fuel Consumption

4,263 kg

Reduced Total Pollutant Emissions

2,825,360



Reduced Number of Stops

Total Benefit\*\*

**\$968,227**

\*\*reduced travel time, emissions, stops & fuel consumption

Benefit Cost Ratio

**15:1**