

## Project Fact Sheet

**Project:** S.R. 51 Traffic Signal Enhancement

**Location:** Allegheny County  
Brentwood Borough  
Whitehall Borough  
Baldwin Borough  
West Mifflin Borough  
Pleasant Hills Borough  
Jefferson Hills Borough

**Project Elements:** 25 signalized intersections  
in 4 separate systems

- 1 new mast arm & support
- 22 new electrical services (using existing poles)
- 110 12" LED vehicular signal heads
- 114 Type B pedestrian signal heads
- 132 pedestrian push buttons
- 86 loop amplifiers
- 1,622 SF structure-mounted signing
- 4 master Wapiti Type 170 closed loop software packages
- 22 local Wapiti Type 170 software packages
- 15 type 170 controller assemblies
- 2 new spread spectrum radio systems
- Reused 2 fiber optic systems with 11 new fiber optic modems – added one link spread spectrum radio
- 4 GPS antennas and receivers

**Cost:**

- Construction Cost = \$514,000  
(10% less than initial estimate)

**Maintenance Benefits:**

- Avg. incandescent intersection = 2,060 watts per month = \$175/month = \$2,100 / year
- Avg. LED intersection = <165 watts per month = \$23/month = \$276 / year
- 5-year energy savings for project = \$200,640
- LED signal heads guaranteed for 5 years → bulb replacement savings = \$594,000

**Travel Benefits:**

- Reduced NB delay in AM Peak by 7.1%
- Reduced NB delay in PM Peak by 8.4%
- Reduced SB delay in AM Peak by 20.8% w/33% reduction in # of stops
- Reduced SB delay in PM peak by 5.9%

