

# CITY OF CAMAS, WASHINGTON

## LED Streetlights Energy Efficiency Upgrades

Project Value:

**\$1,900,000**

Estimated Annual Energy Cost Savings:

**\$97,638**

Annual Energy Savings:

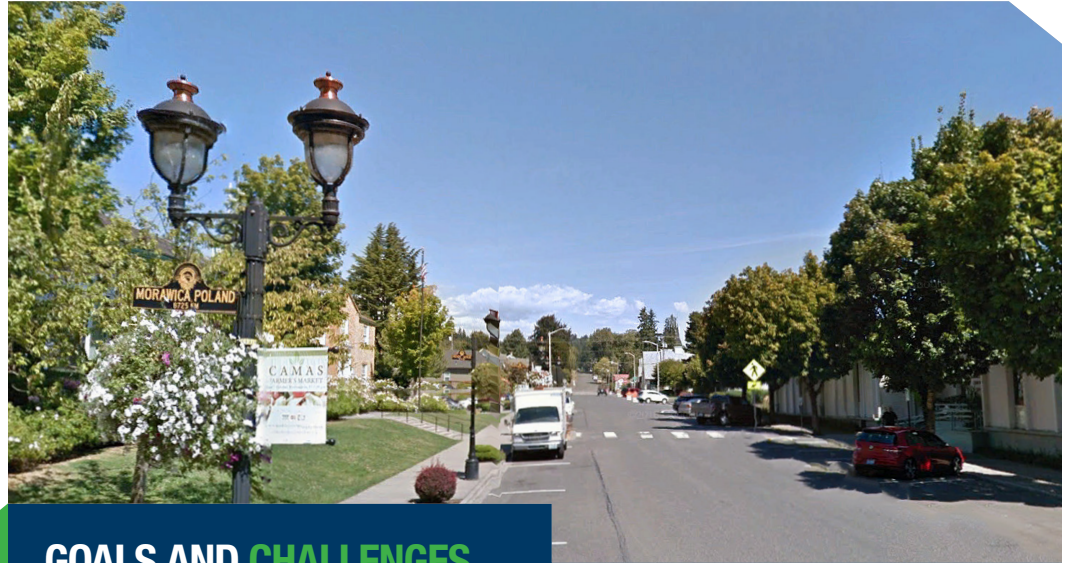
**1,161,797 kWh**

### IMPROVEMENT DETAILS

- Upgraded all city-owned streetlights to LED
- Provided all required work permits and inspections
- Performed detailed lighting designs to confirm that the proposed upgrades satisfied RPS-8-14 guidelines wherever possible
- Installed sample retrofit kits and sample new fixtures for all of the different fixture types prior to construction, in order to validate the lighting designs and allow owner the opportunity to see what the new lights were going to look like
- Commissioned system to ensure proper system operation
- Provided operator training on all systems

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### GOALS AND CHALLENGES

The City of Camas owns and maintains approximately 3,300 streetlights throughout city limits. All streetlights used high pressure sodium (HPS) lamps ranging in size from 70 to 400 watts. The city made use of eighteen different lighting fixtures with the majority being cobra head and acorn style. Existing streetlights had characteristics of low color rendering index, low Kelvin temperature, and had an average lifespan of about 24,000 hours.



Recognizing that available technology is more efficient at generating light, produces a higher color temperature, improves color rendering abilities, and has an average lifespan of over 100,000 hours, the city contracted Willdan to provide project assessment and implementation of what would become the largest energy efficiency project in the city of Camas.

### SOLUTIONS AND OUTCOME

The local utility gave Willdan engineers ARNet data that showed the GPS locations of the majority of streetlights and Willdan and our electrical subcontractor provided the GPS locations for the remaining streetlights. The city also provided input from a previous successful pilot campaign where LED installation occurred on one downtown street. With this information, Willdan's team of specialists identified an appropriate upgrade for each of the 18 different types of streetlights owned and operated by the city.

Willdan ensured success by installing additional sample retrofit kits to monitor LED performance. Following initial installations, Willdan's team worked with local operators to provide training, system commissioning, and to guarantee that upgrades were compliant with local and state regulations.

Following the project, the city of Camas enjoys improved color rendering index, increase color temperature, and drastically reduced annual energy costs and maintenance costs.