

ASPHALT INFORMATION

Purchased Plant at end of 2017

- According to the American Association of State Highway and Transportation Officials (AASHTO), reconstructing roads after they've deteriorated can cost 3xs more than preventative maintenance

How much did the Plant cost?

- Total cost of the plant was just over \$1.3 million
- Used \$500,000 from Economic Development Sales Tax
- Pay \$235,000 on lease – final payment 2024

Why doesn't the Plant run all the time?

- Temperature needs to be consistent 45° (May to September)
- Need to have raw materials to run the plant
- Street crew has other jobs to do during May to September
- Do not have the funds to run the plant all season long

Why was Illinois completed

- Too costly to complete with required prevailing wage
- Applied for a federal TIGER grant – did not receive
- Contractor price was a little over \$2 million
- First City Project - 2018 – from Marion to Baltimore
- Total tons of asphalt produced – 4,692 costing \$625,000,
- All material costs – including rock for base and concrete for curb - \$625,000
- Saved \$1.5 million doing the project inhouse
- AASHTO estimates it cost \$980,000 just for materials to pave a road

Inhouse Vs. External

2019

- City produced 3,500 tons of asphalt
- City cost to produce and lay asphalt - \$49.00
- Contractor price - \$86.26

2020

- City produced 5,300 tons of asphalt
- City cost to produce and lay asphalt - \$50.00
- Contractor price - \$91.00

What are factors that impact the cost of paving a road?

- Where it is located
- Existing pavement condition
- The width of the road
- Type of soil
- Weather conditions – water, freeze, and thaw

Savings are not the only benefit

City crews mill the road

City crews complete deep patch repairs

City crews address driveway approaches and driveway tubes

City crews address other drainage issues impacting the street

It is important to understand that the asphalt plant is a tool in the tool box to get the city's street infrastructure back to an acceptable level. You don't just turn the plant on and asphalt comes out. You have to put rock, sand, fines, and asphalt cement oil together to make asphalt. This all take money. When the annual street funding is spent the plant shuts down. Many have unrealistic expectations that because we have an asphalt plant that all streets should be paved.

In 2018 the city produced and laid 4692 tons of asphalt.

No asphalt contractor work was done 2018. It took the entire asphalt budget to reconstruct Illinois Street. Reconstructing Illinois street in house saved the city (based on engineering estimates) over \$1.5 million dollars. It was not doable without the asphalt plant.

In 2019 the city produced and laid 3500 tons of asphalt.

Contracted price per ton laid was \$86.26, City price per ton laid was \$49.00. This was a cost savings of \$130,410.

In 2020 the city produced and laid 5300 tons of asphalt.

Contracted price per ton laid was \$91.00, City price per ton laid was \$50.00. This was a cost savings of \$217,300

Price per ton included manpower, equipment, and plant operations cost. The savings annually greatly exceeds the annual asphalt plant payment.

The cost of asphalt is not the only savings seen in the city's new street program. City crews tackle milling, drainage issues, deep patch repairs, driveways approaches, driveway tubes, street cross tubes, etc. which is very costly work to contract out. This costly work done on residential streets is one of the reasons the city was only paving approximately 2.5 to 3 miles of streets annually just 4 years ago. In the last two years, with combining inhouse work and contractor work, the city has averaged over 8 miles of annual street paving and rehabilitation.

The city crews are proud of the work that they are doing and the difference they are making. They are working hard to rebuild the city failing street infrastructure. The numbers, miles paved, and success should speak for themselves, but even community leaders continue to question the validity of the asphalt plant and new street rehabilitation program. It is hard to keep moral high when little appreciation is shown and those who should be speaking the loudest are listening to those with little knowledge.

With the influx of the Economic Development Sales tax in 2018 the street budget seen a 50% increase in funding which resulted in more than a 150% increase in productivity, this is unheard of. 2.5 to 3 miles per year verses over 8 miles per year. Again, the numbers should speak for themselves.

The city is spending approximately \$500,000 annually on concrete streets resulting in only ¼ miles of annually street rehabilitation. A concrete street briefing is being prepared for a future presentation to the city council.

WHY THE PLANT DOES NOT RUN ALL YEAR LONG OR EVEN THROUGH THE CONSTRUCTION SEASON.

1 – temperatures have to be a consistent 45° degrees.

Kirksville temperatures meet this requirement during the months of May through September.

2 – Transportation Sales Tax and 50% of the Economic Development Sales Taxes pay for the street projects both asphalt and concrete.

Funds available for all street work

2019 - \$1.86 million

2020 - \$1.28 million – reduced due to COVID

Concrete allocation

2019 - \$604,614

2020 - \$600,000

Asphalt allocation

2019 - \$1,264,584

2020 - \$841,510

3 – City Street Crews have other responsibilities – laying asphalt is only one responsibility

- Pot Hole Repairs
- Curb and Gutter Repairs
- Concrete Construction and Maintenance
- Right of Way and Ditch Maintenance and Mowing
- Tree Removal from Right of Ways
- Spring and Fall Brush Pick-up
- Street Chip, Seal and Crack Sealing
- Storm Sewer Cleaning and Repairs
- Street Striping
- Traffic Signal and Sign Maintenance
- Alley Maintenance
- Installation of Driveway Culverts
- Landfill Maintenance
- Misc. Activities – barricading for emergency situations, banner hanging, parade clean-up, etc.

Asphalt vs. Concrete basics

Difference in application

Asphalt – 2” overlay for most projects

Concrete – 6” based & 8” concrete

Difference in overall impact

Asphalt – went from 2.5 miles to 8 miles

Concrete – ¾ mile each year

Number of Miles – approximately 133 lane miles of roads in town

Asphalt – 103 miles

Concrete – 30 miles