

## ABOUT OUR PROJECT

The Port of Lewiston has installed approximately 14 miles of fiber optic cable infrastructure and we are expanding. We lease fiber strands to service providers who "light" the fiber and bring high speed internet and phone service to businesses. Our fiber network connects to networks managed by the Port of Whitman County and the Port of Clarkston. This has resulted in the availability of fast and reliable service for businesses throughout our region. Fiber optic cable is in high demand, but private build-out in less populated areas like ours can be slow to develop. That's why the publicly-owned ports took on these projects. Increasingly, our businesses and schools have the benefits of big-city internet while enjoying our rural quality of life.



Learn more about our fiber project and view a network map:  
<http://portoflewiston.com/facts/fiber-optic/>

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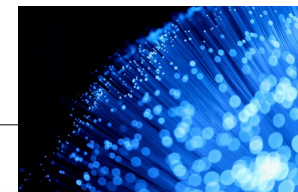
### BROCHURE SOURCES:

<http://mocomi.com/fiber-optics/>  
<http://www.explainthatstuff.com/fiberoptics.htm>  
<http://www.portwhitman.com/doingbusiness/tel-communications>  
FOA Reference Guide to Fiber Optics



THE PORT OF LEWISTON IS INSTALLING FIBER OPTIC CABLE THROUGHOUT LEWISTON. **WHY?**

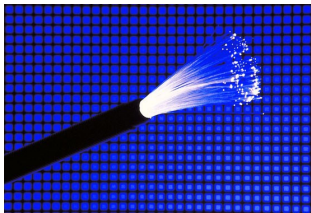
*Fiber optic cable provides fast and reliable internet service. We want that for our businesses and schools. High speed internet helps businesses compete and grow. It helps students learn in the digital age.*



# WHAT IS FIBER OPTICS AND HOW DOES IT WORK?

Fiber optics is the fastest way to send information from one place to another. When you visit a website, send an email or make a phone call, that information is most likely traveling at least part of the way on fiber optic cable.

Information is coded into light. The light travels along a fiber optic strand from its origin to destination. The information is converted back to its original state, such as voice (phone) or digital (computer).



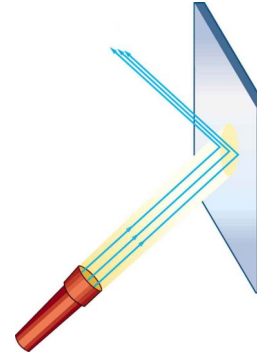
Made of glass and/or plastic, a fiber optic strand can carry a lot of

information at the speed of light (300,000 kilometers per second). Did you know that one strand can carry about 25,000 phone calls? A bundle of fiber not much thicker than a pencil is capable of carrying all the world's current telecommunications traffic. Wow!

The light stays in the strand no matter how the cable twists and turns because of reflection.

## AT-HOME REFLECTION EXPERIMENT

Take a small flashlight and a small box (like a shoebox). Point the light to one end of the box. Observe where the light goes. Next, hold a small mirror at one end of the box and shine the light at the mirror. Where does the light go now? Can you see the light at the opposite end of the box? What if you turn the flashlight so the light hits the mirror at an angle? Now, imagine if the box was instead a long tube and the walls were all mirrors. Where would the light go then? It would keep bouncing back and forth off the mirrors and travel down the tube. That's essentially how optical fibers transport data coded in light, only fiber optic strands are as thin as a human hair!

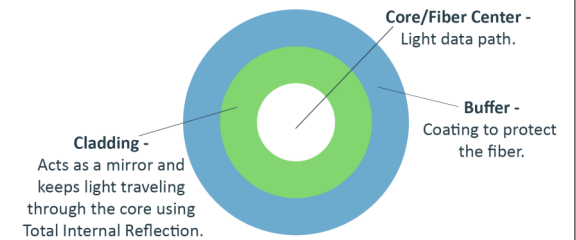


Can you think of other uses for fiber optic cable? Here's one: doctors use the bendable cables to shine light inside the body during surgery.

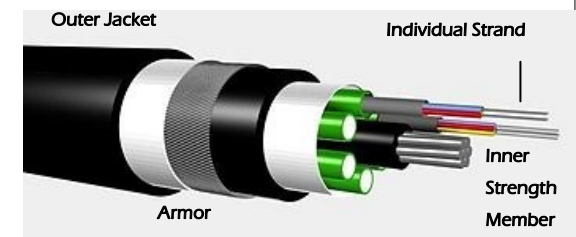
## DISSECTING A FIBER OPTIC CABLE

Fiber optic strands are fragile. The cables are constructed with layers of protection to minimize service outages.

## A FIBER STRAND IS MADE UP OF THESE DISTINCT PARTS



## CABLE



Cables vary in size. Larger cables are used to complete a network's "backbone" while smaller cables serve outlying areas.