



CUMBERLAND
CONNECT


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NEW
CONSTRUCTION
GUIDE



Are you building a new home?

If you are building a new home that could eventually (& hopefully) include Cumberland Connect high-speed fiber services and/or smart-home technology, now is the time to think about the proper wiring to support these technologies. The homes of tomorrow are quite different than the homes that we grew up in! Most devices inside of our homes today and in the future will be connected to the Internet wirelessly via Wi-Fi. Cumberland Connect will provide the latest technology in wireless routers (capable of 802.11ax or ) to your home to connect these devices. If you choose to connect devices in your new home with a cable, now is the time to plan where you want these cables to be installed when the walls are accessible. This can save you big bucks down the road!

Things to Know:

➤ **Wireless Router** – Cumberland Connect will provide your new home with the latest technology in wireless routers. Our wireless router, called the GigaSpire, is capable of delivering up to 1 Gbps download and upload speeds of wireless connectivity throughout your home!⁽¹⁾ No need to go online or to your favorite electronics store to spend hundreds of dollars on the latest consumer-grade wireless router...it's included with your Cumberland Connect service for free!

➤ **Optical Network Terminal (ONT)** – Our installers will install this device near your GigaSpire wireless router. The ONT will be the connection point between your GigaSpire wireless router and the fiber service to your home. (Note: Both the ONT and the GigaSpire wireless router function best when located near the center of your home. Also, both of these devices require an electric wall outlet nearby.)

➤ **Network Interface Device (NID)** – This is a small plastic box that attaches to the outside of your home near the electric meter base. Cumberland Connect technicians will install this device when they run the fiber optic cable from the mainline fiber to your home. This fiber is called the “drop”. No electric power is needed for this device.

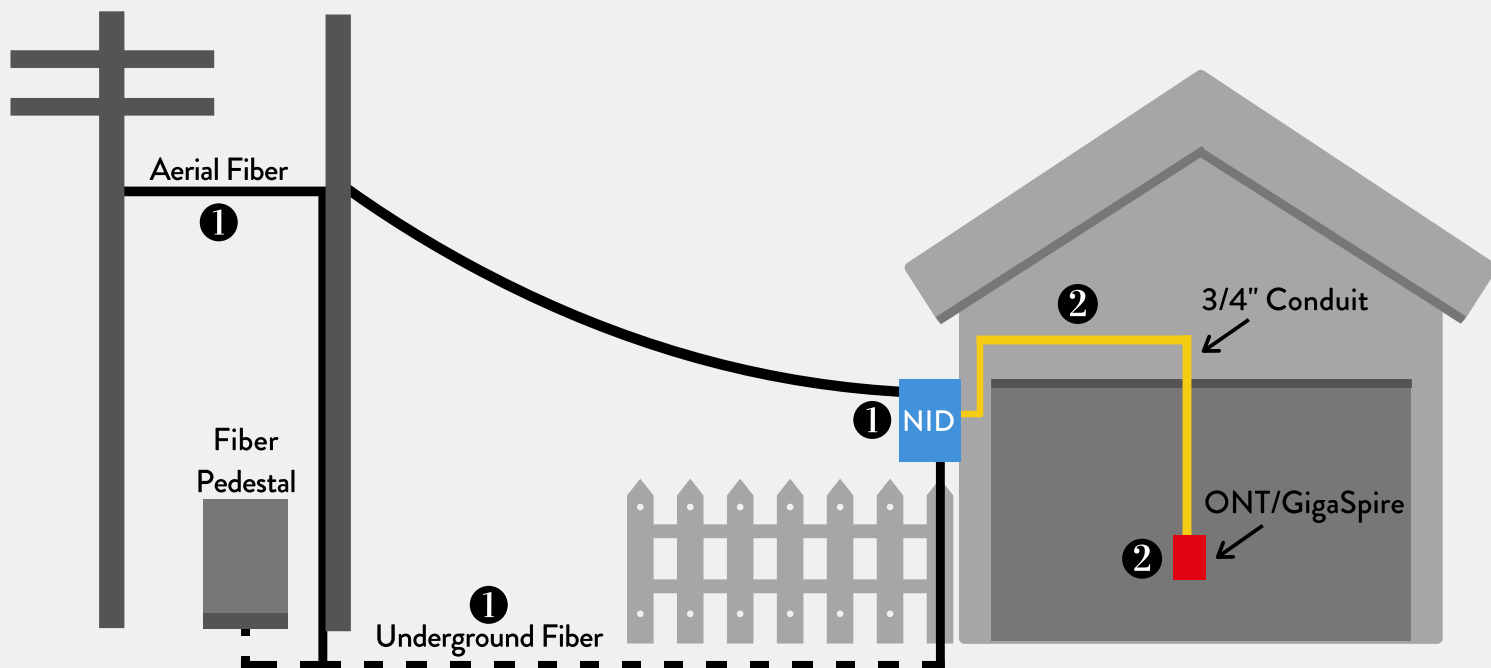
➤ If you anticipate subscribing to Cumberland Connect's landline phone service, it will require a CAT-5E cable to be installed between the ONT and the NID. This CAT-5E cable can be installed in the same conduit that we recommend installing during construction of your new home. See the diagram and notes on the following page.

What You Can Do:

While the walls are open in your new home, we recommend installing a $\frac{3}{4}$ " (minimum) piece of conduit next to your electric meter (where the NID will be located) and run to a location near the center of your home (where the ONT and GigaSpire wireless router will be located). If you choose to run ethernet cabling to rooms within your new home, we suggest running these from the same center point of your home in the same room/location that your ONT and GigaSpire wireless router will be located. Cumberland Connect recommends consulting with your licensed electrician for local building codes before running conduit or ethernet cabling within your new home. (Note: If a conduit/pathway is not provided ahead of time when you are constructing your new home, Cumberland Connect technicians will need access for entry into your attic and/or crawlspace for installation of the micro-fiber cabling between the NID and the ONT.)

What Cumberland Connect Will Do:

When Cumberland Connect high-speed fiber services are available within your area, our technicians will run a fiber “drop” from the mainline fiber cabling to your home. This “drop” could be ran overhead or underground depending on how your electric service is installed. This “drop” fiber will terminate on the side of your home at the **NID**. From the **NID**, our technicians will run a micro-fiber within the conduit that you previously installed into the location inside of your home where the **ONT** and **GigaSpire** wireless router will be installed.



- 1 Technicians will install a fiber “drop” from our mainline fiber either overhead or underground depending on how your electric service is installed. Our technicians will also install the NID near your electric meter base and connect the fiber “drop” to the NID. (Note: No access inside of your home is needed during this phase of the installation. It is likely that the fiber “drop” will be installed by a different technician than will install the remainder of the fiber installation.)
- 2 Technicians will pull micro-fiber from the NID through the previously installed conduit to a central location within your home. The micro-fiber will be connected to the ONT. (Note: The best location to install the ONT and GigaSpire wireless router is near the center of your home for maximum wireless connectivity. Technicians will need access to inside of your home during this phase of the process.)

Keep In Mind:

- Do not run any CAT-5E or CAT-6 cables next to any electric wires or over any fluorescent lights. CAT-5E or CAT-6 is not shielded like coaxial cable and any interference from the electric power or lighting may affect your services. It is recommended to drill a separate hole through the framing and keep the CAT-5E or CAT-6 cables on the other side of the electric power at a minimum of six inches. (Note: Again, please consult with your licensed electrician.)
- Limit the number of 90° turns when installing your 3/4” conduit inside the walls to less than three. Be aware not to create any sharp bends or kinks in the installation of the conduit.
- Depending on the size and construction of your new home, Wi-Fi extenders (GigaMesh) may be required to cover the entirety of your livable space. There is an additional small fee for these devices.

(1) Wireless speeds may depend on end user device and distance to the router.



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This new construction guide is just that...a guide. Please contact Cumberland Connect for specific questions not included within this guide. We look forward to serving your family with all your technology needs in the future. We will strive to be helpful to you in this time of transition.



Please don't hesitate to contact us with any further questions at (800-987-2362) or visit us anytime at www.CumberlandConnect.org



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