

Dig Once: A How-To Guide



What is Dig Once?

The objective of Dig Once is to have all major infrastructure programs install an underground fiber link when building or renovating roads, railways, pipelines, utility infrastructure, and energy distribution channels. The policy strongly suggests laying fiber rather than empty conduit to prevent waste. Empty conduit often fills with dirt or is otherwise destroyed during utility and roadway construction projects.

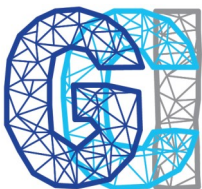
Considerations for Advancing the Deployment of Broadband Through Dig Once

1. **Plan**—*prevent waste* by identifying areas where broadband infrastructure is most needed and will be used prior to laying fiber
2. **Legality**—consider the *local laws* on who can fund the broadband project and who can lay fiber
3. **Collaboration**—*minimize costs* and unnecessary digging by ensuring that stakeholders such as utility companies, roadway providers, and broadband providers work together to plan and execute the project phases; *joint-use* trenches are strongly suggested
4. **Document**—make information on the *location* of fiber lines easily available to stakeholders and local government
5. **Share Knowledge**—work with local governments to teach *best practices* on how to install their own fiber by providing construction plans and standards
6. **Use Modern Digging Technology**—*avoid trenching* when adding fiber to *heavily populated areas* by using either horizontal directional drilling or micro-trenching

Dig Once Advantages

1. **Cost Savings**—Limiting the number of times transportation and utility channels must be opened up is approximately *ten times cheaper*¹ than adding broadband infrastructure after the channel are built. When fiber installation is coordinated with a road or utility project, there is a *twenty percent cost savings*.¹ The cost savings applies primarily to urban environments where the only option is to install fiber underground. Cost is minimal if the installation is less than three feet below-ground or is hung above-ground. However, aerial infrastructure is more susceptible to damage than below-ground fiber.
2. **Increased Access to and Reliability of Broadband Networks**—Laying fiber in rural areas encourages these areas to build their broadband network at a faster rate than current efforts. Additionally, installing fiber in areas that already have broadband will improve network reliability.
3. **Public Benefits**—Dig Once policies can increase public safety systems and decrease government telecommunications costs. Additionally, decreased road construction will reduce traffic congestion as well as increase infrastructure life-spans, which are often diminished the more times the infrastructure is under construction.
4. **Economic Benefits**—Increased access to broadband will benefit existing businesses and will boost local economic activity by drawing businesses to the area.
5. **Decrease Time Needed to Deploy Fiber**—When conduit is already in place at the time of fiber installation, the time and cost needed to deploy the fiber will be minimal if the conduit remains in good condition and is usable. Benefits diminish when the conduit becomes damaged and when there is poor conduit location tracking.

¹<https://www.fhwa.dot.gov/policy/otps/workplan.cfm>



**GLOBAL
CONNECT
INITIATIVE**
1.5 BILLION MORE ONLINE BY 2020

For more information on the Global Connect Initiative, please go to:
<https://share.america.gov/globalconnect>