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UTILITY FORMATION

OWNERSHIP AND OPERATION OF BROADBAND UTILITY - OPTIONS AND OPPORTUNITY

Ohio has various organizational structures authorized by law that can be created to carry out a public or quasi-public purpose, including the projects identified in the final section of this Study. Many of these entities appoint a board and make decisions within a specific focus area, such as transportation, housing, community health or education. Because these organizations typically operate in a smaller geography or singular area of focus, a broader approach spanning multiple geographies may call for a different structure. Therefore, it will be important for the region to consider which entity or entities have the broadest authority, the most consistency, and the ability to cooperate with the region and participating counties on their broadband implementation goals.

A summary of such entities is below; however, specific oversight recommendations pertaining to each project, including applicable funding mechanisms, are provided in the Project Identification section. In reviewing, it is important to keep in mind ownership versus operation: all of the following options assume public network *ownership*. That said, opportunities to partner with private entities for *operation* are also included below. Please also note that, while the system we are recommending resembles a utility, for legal purposes it would not be a utility as it is not regulated by the State of Ohio or the Federal Government as a utility, nor would it be wholly operated under the authority of Sections 4 and 6 of Article XVIII of the Ohio Constitution, which authorizes municipalities to acquire and operate public utilities.

Port Authority Ownership

We recommend the creation of a new broadband authority (the “Broadband Authority”), whose purpose would be to own and operate publicly owned broadband network infrastructure across the three-county region, as needed to ensure the consistent and thorough extension of high-speed internet service for every resident, business, and community organization. Oversight by a Broadband Authority, which would be organized for state law purposes, as a port authority, is likely to be highly beneficial as it pertains to having

broad authority, consistency, and cooperation.

Section 4582.21 -99 et. seq. of the Ohio Revised Code (the “Act”) provides the necessary authority for establishing the Broadband Authority as a port authority. Under the Act, the authorized purposes of a port authority include “activities that enhance, foster, aid, or promote transportation, economic development, housing, recreation, governmental operations, culture or research within [its] jurisdiction.”¹ The Act authorizes the formation of the Broadband Authority by any combination of a municipal corporation, township or county.² In order to maximize the territorial jurisdiction of the Broadband Authority, ideally the Counties of Ashtabula, Mahoning and Trumbull would form the Broadband Authority, with other subdivisions joining at their discretion.³

The powers of a Broadband Authority, like any port authority are broad, and well suited to the ownership, operation, and financing of a publicly owned broadband system. These powers include:

- Acquisition of real and personal property
- The power to own, lease, sell and construct improvements to real property
- The issuance of revenue bonds for port authority facilities.
- The receipt of federal and state grants and loans and other public funds
- Operation of transportation, recreation, governmental or cultural facilities and establishment of rates and charges for port authority facilities
- The power to cooperate with other governmental agencies and to exercise powers delegated by such agencies⁴

In addition to these powers, a port authority may, with voter approval, levy up to a one mill tax on the total value of all property within its jurisdiction.⁵ This levy, in the case of a Broadband Authority formed by the three counties could be expected to raise in excess of \$3 million per year; these amounts could be used for the purposes of the Broadband Authority, to pay tax anticipation notes, or could be used to pay debt service on long term indebtedness of the Broadband Authority if the levy was tied to a bond issue.⁶

There are multiple port authorities already in existence in the region, including the Ashtabula County Port Authority; the City of Ashtabula Port

Authority; the Conneaut Port Authority and the Western Reserve Port Authority. Theoretically, any or all of these existing port authorities could serve as the overall owner of broadband facilities, assuming that a cooperative agreement could be reached by all relevant parties. However, the boards of these entities do not include representatives chosen by all three counties, and they are already engaged in important activities.

The creation of a separate Broadband Authority governed by a board that is appointed by all of its constituent entities would ensure regional cooperation and representation. Further, in order to ensure that the Broadband Authority is focused on the Broadband mission, we suggest that the entities forming the Broadband Authority consider taking advantage of provisions in Section 4582.22 of the Revised Code which restrict the powers granted to the Broadband Authority.⁷ As explored further in the Programming and Financing section of the Study, to the extent that the Broadband Authority requires additional financing resources to achieve its mission, the Broadband Authority could cooperate with existing port authorities, whereby those port authorities could use their resources, including in particular the credit enhancement available from common bond funds, to help the Broadband Authority achieve its mission.

Broadband Cooperative⁸

A cooperative can be organized under Ohio law for the purpose of obtaining a particular service in a designated area, which could be regionally or within a smaller community. A cooperative is owned and controlled by the people who use its service. Similar to the electric cooperatives that were created to address the electricity needs of rural communities, broadband cooperatives enable area residents to take control of local connectivity and service. In addition, a broadband cooperative may decrease the cost of that service for its members and can cost-effectively convert existing infrastructure into capital for broadband expansion.

Cooperatives function as a type of corporation (business or nonprofit): if used in the project area, one that would be chartered, organized, and operating under the laws of the State of Ohio. Ohio Revised Code Chapter 1729 governs Ohio cooperatives.

Case Study **SEOBC**

Formed in April 2020, the Southeast Ohio Broadband Cooperative (“SEOBC”) is working to provide broadband access to unserved and underserved communities in rural Ohio. Originating out of Washington County, Ohio, residents were fed up with the poor speeds and lack of service and decided it was time to stand up its own combination fiber/ fixed wireless solution. The SEOBC contracted with GEO Partners LLC to provide various build-out options. After securing funds through crowdsourcing and successfully lobbying Washington County to allocate \$50,000 of the \$3.3 million in federal CARES Act funds granted to Belpre and Marietta, the hybrid model has allowed hundreds of families to join the cooperative for a one-time \$5 fee. Cooperative members then choose the speed of their service, ranging from \$60 to \$100 per month—significantly cheaper and better quality than satellite and dial-up options in the county. With \$290 million of Governor DeWine’s proposed budget recommended for broadband expansion, the SEOBC hopes to secure additional funds to continue the cooperative’s important work.⁹

Cooperatives are controlled by a board of directors who are elected by and operate for the benefit of the member-owners. Revenues from the cooperative are divided among members.

Formation of a broadband cooperative would require significant local buy-in. The steps to cultivating such buy-in include: (1) identifying the area in which services will be offered through the collaborative; (2) identifying the stakeholders within such area who are in need of enhanced broadband service, as well as the leaders in the area that are willing to convene the member customers to incorporate the cooperative; and (3) develop a business plan, with the assistance of trusted advisors, to ensure the execution of the requisite incorporation and operation documents.

While a cooperative that could cover the entirety of the region is not a practical solution, one or more smaller cooperatives could work in concert with a region wide public network owner, like a Broadband Authority, to pool resources to ensure the delivery of service to certain areas.

“Co-ops are popular in emerging industries, such as rural broadband, because they use the power of local markets to satisfy the limited needs of a local community that might not otherwise be served by larger companies in the same low-cost way.”

- West Virginia Broadband Enhancement Council, Guide to Broadband Co-Ops (2017)

Nonprofit Organization

Any person, on their own or in concert with others, may form a nonprofit corporation under Ohio Revised Code Chapter 1702 by signing and filing with the Secretary of State articles of incorporation that set forth the requisite information.

Strengths of a nonprofit ownership model include off-setting or shifting some of the project responsibilities to a new entity governed by a Board of Directors, which can be charged with fulfilling the region’s goals, such as creating a certain type of local network (e.g., open access). However, the counties are able to maintain an active role in project delivery, serving essentially as an operational agent of the nonprofit, while mitigating the effects of local political changes and pressures. Additionally, a nonprofit could contract with the Broadband Authority as a subcontractor for certain network functions; such a contract could, if structured and staffed properly, increase the resources available to the Broadband Authority and could also provide additional expertise.

Such a model may also increase grant and funding/ financing opportunities to support the development of local broadband infrastructure. For example, if the nonprofit was structured so as to focused on broadband and smart energy, it could also bring in port authorities, Energy Special Improvement District (“ESID”) and Property Assessed Clean Energy or “PACE” financing, which will be explored further in the Programming and Financing section. In addition, under the American Rescue Plan Act, state and local governments may transfer funds to private

Case Study Westfield Gas & Electric

Leyden, Massachusetts is a rural northwestern community just 96 miles west of Boston. It is a town of around 800 residents without any major state routes that had historically lacked broadband access. However, in 2010, a regional non-profit cooperative—WiredWest¹⁰—was formed in order to build high-speed broadband networks in the Berkshires. Leyden joined a few dozen other towns to form their own municipally owned utility called Municipal Light Plants. In 2017, Leyden received a \$680,000 grant from the state and finalized its network design in 2019. In January 2020, Westfield Gas & Electric¹¹ - the city of Westfield’s gas and electric utility - received \$10.2 million from the FCC’s CAF II auction to expand fiber networks in 20 nearby communities in western Massachusetts, including Leyden.¹² In July of 2020, the town put out a \$1 million bond issue to fund the fiber drops and installation as Westfield Gas & Electric did the heavy lifting of building the network. Whip City Fiber,¹³ a division of Westfield Gas & Electric, operates as the Internet Service Provider (ISP).¹⁴

nonprofit groups, public benefit corporations involved in passenger or cargo transportation, and special-purpose units of state or local governments.

All that being said, the nonprofit will be required to abide by nonprofit corporate requirements, including potentially, requirements of federal law if the nonprofit were to be formed as a 501(c) (3) entity or other type of entity with a federal tax advantage. The region would also need to ensure that the nonprofit serves a specific purpose that enhances the delivery of service within all or a portion of the region, and does not become an obstacle to overall progress. As addressed further in the Project Identification section, repeat feedback was received regarding lack of cohesion in addressing broadband in the region – the

region would need to ensure that the creation of a new nonprofit organization would not invite additional confusion as to local leadership and responsibilities for broadband expansion.

Community Improvement Corporation or Broadband Development Corporation

A community improvement corporation (“CIC”) is an economic development corporation organized under Chapter 1724 of the Ohio Revised Code.

Community improvement corporations are permitted under Ohio law:¹⁶

- To borrow money for any of the purposes of the community improvement corporation by means of loans, lines of credit, or any other financial instruments or securities;
- To make loans;
- To purchase, receive, hold, manage, lease, lease-purchase, or otherwise acquire and to sell, convey, transfer, lease, sublease, or otherwise dispose of real and personal property;
- To acquire the good will, business, rights, real and personal property, and other assets of any persons, firms, partnerships, corporations, joint stock companies, associations, or trusts, and to assume, undertake, or pay the obligations, debts, and liabilities of any such entity;
- To acquire, subscribe for, own, hold, sell, assign, transfer, mortgage, pledge, or otherwise dispose of the stock, shares, bonds, debentures, notes, or other securities and evidences of interest in any entity;
- To mortgage, pledge, or otherwise encumber any property acquired pursuant to the aforementioned powers;
- To become a member of or a stockholder in a development corporation formed under Chapter 1726 of the Revised Code;
- To serve as an agent for grant applications and for the administration of grants, or to make applications as principal for grants for county land reutilization corporations;
- To engage in code enforcement and nuisance abatement;
- To charge fees or exchange in-kind goods or services for services rendered to political

subdivisions and other persons or entities for whom services are rendered;

- To employ and provide compensation for an executive director to manage the operations;
- To purchase tax certificates at auction, negotiated sale, or from a third party; and
- To be assigned a mortgage on real property from a mortgagee in lieu of acquiring such real property subject to a mortgage.

CIC’s have a few advantages which may make them useful in connection with broadband projects. First and foremost, they are private corporations that may be formed by and controlled by political subdivisions. As CICs may acquire property from local subdivisions without competitive bidding, they are a good vehicle for real estate assembly in cooperation with local subdivisions.

These advantages come with limitations. Although a CIC is a private entity, every CIC is subject to annual audit by the Auditor of State, and members must comply with Ohio Ethics Laws. Further, it is doubtful that under Ohio law a CIC would be empowered to own, operate, and contract to the extent necessary to operate a broadband network.

In light of these limitations, we would recommend utilizing a CIC for property acquisition, and using a Broadband Authority or other similar entity for ownership and operation of a broadband network.

Public-Private Partnership

Explored in further detail in the Programming and Financing Section and the Project Identification section, a public-private partnership or “P3” in which the broadband expansion project is managed and operated by a third party private provider can be an appropriate solution for projects in which the public bodies seek to retain ownership of the infrastructure, but require the expertise of a private sector partner to operate it.

There are a variety of benefits to private operation of a community broadband project. Unlike a public entity, this is the provider’s “bread and butter” – the appropriate partner likely has substantial experience and significant systems in place to operate and manage a network system. Depending on its structure, a P3 likely will

**Case Study:
ECFiber**

Early in 2008, a group of people living in east-central Vermont who understood the importance of the internet to economic development formed ECFiber, a 501(c)3 not-for-profit corporation with the goal of providing fiber access to every premise in 23 contiguous towns and one municipality in central Vermont. ECFiber would be chartered and owned by the towns, and any excess revenues that might accrue would be given to the towns in accordance with the number of ECFiber subscribers in the town. Governance would be provided by a Board of Governors consisting of one representative and alternates from each member town, formally designated by the town's Selectboard, or governing body.

Approximately \$1 million dollars in seed financing was secured from insiders who were dedicated to building a network in their areas of Vermont. The seed financing was sufficient to establish an office and technical hub in South Royalton and to build a 20-mile pilot network in Barnard, one of the neighboring towns. Local notes were then offered to members of the community in amounts of \$2,500, and were purchased primarily by local investors in the towns to be serviced. By 2015, ECFiber had received about \$7 million from about 500 investors, and the network was being built, albeit slowly, using these funds. It was clear that while the effort was likely viable, it would take a lifetime or more to meet the goal of the project, given the slow pace of investment.

ECFiber, as established, was purely an administrative and governance organization, having no staff. Early on, therefore, it established a partnership with a like-minded organization, ValleyNet, also a not-for-profit organization that previously offered dial-up service and was interested in moving further into the Internet space.

At the beginning of 2016, ECFiber formed the first CUD, the East Central Vermont Telecommunications District in Vermont. A financial plan was put into place for four rounds of financing over four years, totaling about \$40 million in the aggregate that would allow the completion of the majority of the network. The post-2016 business plan had to assure that revenue generation was sufficient to cover scheduled interest payments as well as assist with principal repayment. ECFiber's bonding authority did not obligate the State in any way as they were not general obligation bonds: rather, they were revenue bonds, and interest payments depended upon the ability of ECFiber to maintain sufficient earnings to meet interest payments.

After the formation of its CUD, ECFiber promptly went to the capital markets and sold a \$14.5 million allotment of long-term revenue bonds. Part of the proceeds were used to retire the old debt, including the \$1 million loans by the initial investors, resulting immediately in reduced interest repayment costs. The other part of the proceeds was used to continue extending the network. Subsequently, ECFiber returned to the capital markets almost yearly and has raised to date a total of about \$41 million in long term revenue bonds, experiencing growing acceptance and lower interest rates in each tranche.

To this day, the cooperation exists, and similar groups are forming both in Vermont and New Hampshire. ECFiber has continued to raise money in order to extend the network.¹⁵

also shift network operation and maintenance responsibilities to the private entity, without divesting ownership or control (although there may be some communities in which such responsibilities can remain with the government entity and purely public ownership is feasible instead of a P3 approach).

In a P3 model, roles are clearly delineated, and each partner operates within its core competency – the public sector provides financing and land/ infrastructure management for the benefit of its constituents; the private sector performs the same tasks as would with a private network. As a result, the P3 models also divides the risk of the project between the public and private entities. While control of various components is also divided (and the balance of this division, both risk and control, between the parties is instrumental), a P3 gives the public sector additional control over its local relationships with Internet Service Providers and area broadband expansion. This division, and financial support from the public sector, can also encourage additional private investment in the region and provides revenue generation opportunities for the public sector if a network is built out in such a way that capacity can be “leased” to multiple providers at competitive rates that are less than their build-out costs would be for like infrastructure. This, in turn, provides additional provider choice to local subscribers. The public entity can also maintain sufficient network capacity for its local needs, whether governmental, commercial, and/ or residential.

However, like all potential models, a P3 has its risks. Generally speaking, a P3 arrangement will struggle when the public entity takes on too much risk and not enough control of the project. It is important that public sector thoroughly evaluate, with the support of advisors, how much risk (financial, personnel, etc.) it can bear in entering into a P3 arrangement and the contracts between the parties should accurately reflect these levels. These agreements may also need adjustments as new assets and/ or service are integrated into the model.

There is also a heightened administrative burden for a broadband P3, particularly at the outset. A P3 will require a public Request for Proposal (“RFP”) process, as well as vetting and approval, as further discussed in the Project Identification

Case Study Medina Fiber

Founded by Medina County, Ohio, Medina Fiber is a network providing increased data bandwidth to help businesses in the county grow and stay ahead of the competition. Originally financed through bonds and grants, Medina Fiber had its first customers come on in 2013 and was managed by the Medina County Port Authority. Fast forward to 2019 and Medina Fiber partnered with Lit Communities to finance the network in Medina County. Phase I calls for an \$8 million investment and about \$50 million to cover the entire county. As of March 2021, construction of residential fiber optic internet infrastructure broke ground in Seville—a process that was delayed due to COVID-19. The network’s first residential customers are expected to be online by June and the goal is to expand service to about 50,000 Medina County households over the next three to five years.¹⁷

section of this Study. There can also be various compliance components for a P3.

Most P3 models would be structured so that the public sector would not be active in the network’s operations. Although this is a strength to the model, particularly if local expertise is not otherwise available, it does subject the public sector to the private party’s ongoing business risks. Partner selection is highly important to ensure continuity, particularly because this arrangement can develop into a relationship more likened to that of a customer (i.e., public sector) and vendor (i.e., private sector). For this reason, private partner selection is also highly important – this additional layer to the project could incite local suspicion. There may also be a limited number of carriers that are willing to provide carrier-neutral options that don’t favor a particular provider’s operations, should that be the region’s goal.

Council of Governments

Under a Council of Governments (“COG”), a governing body of any two or more counties, municipal corporations, townships, special districts, school districts, or other political subdivisions may enter into an agreement with each other, or with the governing bodies of any counties, municipal corporations, townships, special districts, school districts or other political subdivisions of any other state to the extent that laws of such other state permit, for establishment of a regional council consisting of such political subdivisions. These structures can also borrow federal funds, generate revenue, and issue debt.

COGs are “by the governments, for the governments,” meaning they are made up of a membership of townships, cities, villages, counties, and other government authorities (transit authorities, port authorities, school districts, etc.) to combine governing powers to achieve a vision that spans across municipal boundaries. As such, a COG allows each of these subdivisions to have a voice and seat at the table in a number of areas already within their expertise, such as land use and development, zoning, economic incentives, transportation, etc. and to facilitate communication among stakeholders.

By State law, a COG does not displace any statutory powers of its members. Rather, a COG serves as a more effective way to deploy powers for projects crossing municipal boundaries in a formalized cooperative manner. Further, land ownership is not transferred to the COG or given up to the COG as part of membership. Each political subdivision retains all of its powers, properties, and discretion in how to exercise its powers and use its properties after entering a COG. While Ohio law prescribes specific requirements for COGs, COGs are a mechanism used throughout the Country.

The COG can act as the facilitator by and for the political subdivisions, including school districts that may hold spectrum frequencies, while utilizing the powers afforded to it by these other entities as partners.

For the purposes of this Study, the COG could be pre-existing, such as the Eastgate Regional Council of Governments, or a new COG could be formed for oversight. It should be noted however, that the COG has no separate powers to own

and operate broadband facilities; its role is in the nature of a facilitator/air traffic controller.

Case Study COG

Central Ohio's NW 33 Innovation Corridor Council of Governments is comprised of Union County, the City of Marysville, the Marysville-Union County Port Authority, and the City of Dublin. The COG exists to review, evaluate, and make recommendations relative to the planning and programming, the location, financing, and scheduling of public facility projects within the region that affect the development of the US-33 corridor. The COG offers an example on how communities can band together in attracting smart mobility research and development, as evidenced by its initial \$6 million award in 2016 from the U.S. Department of Transportation for the Advanced Transportation and Congestion Management Technologies Deployment Program grant. Additional funding assets include regional stakeholders such as Honda of America, The Ohio State University, and the Transportation Research Center (“TRC”). The physical infrastructure of the U.S. 33 Smart Corridor includes: (1) automated/connected vehicle infrastructure; (2) dynamic signal phasing and timing; (3) a local smart network; (4) a connected test fleet; (5) a pedestrian in crosswalk warning system; (6) connected vehicle applications; and (7) program management, maintenance, and operations. Receiving the bulk of the investments, the TRC will have \$45 million to build the first phase of a 540-acre Smart Mobility Advanced Research and Test (“SMART”) center within its grounds. Further, the TRC has secured \$124 million to invest in an advanced wind tunnel facility.¹⁸

SECTION ENDNOTES

1. *O.R.C. § 4582.21(B) | Newly created or adopting port authority definitions.* (2000). Retrieved from Ohio Legislative Service Commission: <https://codes.ohio.gov/ohio-revised-code/section-4582.21>.
2. *O.R.C. § 4582.22 | Creation of new port authority.* (2000). Retrieved from Ohio Legislative Service Commission: <https://codes.ohio.gov/ohio-revised-code/section-4582.22>.
3. Section 4582.30 of the Ohio Revised Code restricts the ability of the Counties of Ashtabula, Mahoning, and Trumbull to create a new port authority, as each of these counties is a member of a port authority. However, other provisions of the Revised Code would permit the joinder of these counties into an existing port authority, or in the alternative, would permit these entities to enter into a cooperative agreement whereby a broadband authority would be created. That being said, working with the General Assembly to remove the restrictions contained in 4582.30 on the creation of a new, separate Broadband Authority is recommended.
4. *O.R.C. § 4582.31 | Powers of port authority.* (2021). Retrieved from Ohio Legislative Service Commission: <https://codes.ohio.gov/ohio-revised-code/section-4582.31>.
5. The duration of the levy is limited to five years except when the tax is to be levied for bonded indebtedness. *O.R.C. § 4582.40 | Levying taxes.* (1989). Retrieved from Ohio Legislative Service Commission: <https://codes.ohio.gov/ohio-revised-code/section-4582.40>.
6. It is unclear whether a broadband authority created from an existing port authority by joinder would have the power to levy a tax with voter approval over the three county area. In such a case, any voted tax would limit such a port authority's ability to levy taxes for other purposes, for example economic development purposes or for operations.
7. If the Eastgate coalition determines to pursue the amendment of Section 4582.30 to authorize the establishment of a separate new three-county Broadband Authority, such a limitation could be built into the amendment language.
8. *GUIDE TO BROADBAND CO-OPS.* (2017). Retrieved from West Virginia Broadband Enhancement Council: <https://broadband.wv.gov/resources/broadband-cooperative-associations/>.
9. *Southeast Ohio Broadband Cooperative.* (2020). Retrieved from Southeast Ohio Broadband Cooperative: <https://www.seobc.us/>. See also R. Marcattilio-McCracken. (2020). *Residents in Washington County, Ohio Form Broadband Cooperative.* Retrieved from Community Broadband Networks: https://muninetworks.org/content/residents-washington-county-ohio-form-broadband-cooperative?mc_cid=5c8a3330c5&mc_eid=ed1e20ad7f. See also C. Doyle. (2021). *Ohioans are already trying to bridge the digital divide. Will state lawmakers help?* Retrieved from The Columbus Dispatch: <https://www.dispatch.com/story/news/state/2021/02/21/appalachian-ohio-high-speed-internet-broadband-divide-lawmakers-help/6757734002/>.
10. *WiredWest.* (2017). Retrieved from WiredWest: <https://wiredwest.net/>.
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12. *\$10.2M grant will help expand fiber-optic broadband from Westfield Gas + Electric.* (2019). Retrieved from MassLive: <https://www.masslive.com/news/2019/12/102m-grant-will-help-expand-fiber-optic-broadband-from-westfield-gas-electric.html>.
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16. *O.R.C. § 1724.02 | Powers of corporation..* (2021). Retrieved from Ohio Legislative Service Commission: <https://codes.ohio.gov/ohio-revised-code/section-1724.02>.
17. About – Medina Fiber. (n.d.). Retrieved from Medina Fiber: <https://medina.litcommunities.net/about/>. See also J. Delozier. (2019).

Medina Fiber, an open fiber network, launches in Medina County. Retrieved from The Gazette: <https://medina-gazette.com/news/181176/medina-fiber-an-open-fiber-network-launches-in-medina-county/>. See also J. Delozier. (2021). *Fiber-to-home construction begins in Seville*. Retrieved from The Gazette: <https://medina-gazette.com/news/253309/fiber-to-home-construction-begins-in-seville/>.

18. *More than \$224 million will be invested in Ohio's 33 Smart Mobility Corridor by 2020*. (2018.). Retrieved from Intelligent Transportation Systems Joint Program Office: <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/9319210e9ec192da85258305004b90f9>.