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P3 Financing Approaches for Broadband Infrastructure

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P3 Financing Approaches for Broadband Infrastructure

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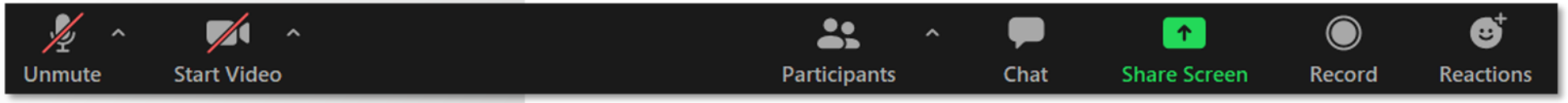

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P3 Financing Approaches for Broadband Infrastructure

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CDFA - P3 Options and Financing Approaches to Broadband Infrastructure

February 21, 2023

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What is driving the rise of public-private partnerships?

- Significant infrastructure or other needs
- Limited available funding resources
- Third Party Management Expertise
- Core Competency
- Perception of the “Ease in contracting and obtaining capital market-based financing”
- Politics

Types of P3 Transactions

- Broadband
- Student Housing
- Airports
- Roads
- Government Facilities/Mixed Use
- Water
- Wastewater
- Schools
- Street Lights
- Parking facilities
- Energy Savings Projects
- “Resilience”
- Kiosks
- Trains/Public transportation
- Energy Production/Distribution
- Other

Why P3

- Demand for Broadband
- Increased funding availability from the federal government
- Communities need funding and expertise and some traditional broadband providers are not upgrading the traditional communication lines.
-

P3 - Types of Transactions

- **Attract Private capital** –public sector takes actions to permit or encourage greater private sector investment. The government in this instance typically facilities the development but does not undertake risk for the project. Example – Google Fiber
- **Concession/Demand-risk projects** – Developer design, build and finances the Project. Project is largely financed by user payments and the developer monetizes the new or existing asset. This model is often used for toll roads, broadband, student housing and parking. Less Risk to owner.
- **Availability-based payment structures –** After construction completion, the private developer is entitled to payments from the government as long as contract conditions are fulfilled. Availability payments are sized to cover operating and maintenance costs, debt service costs (for the installation) and equity returns.
- **Asset monetization or long-dated concession agreements – Developer takes over existing facilities -** public assets are used for commercial development and the funds are used for new public facilities
- **Hybrids** (evolution of the project need). Mix of the above.

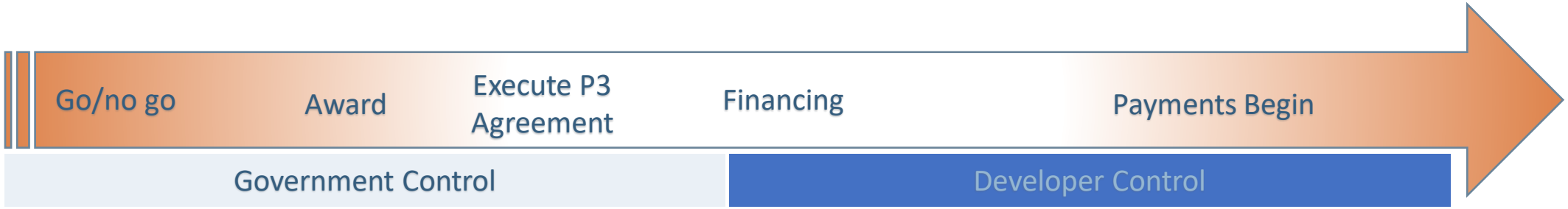
What are the Benefits

- Projects can obtain the benefit of management and construction expertise where the developer has the incentive to complete the project on time and on budget
- Capital Market participants oversee and include checks and balances in the project (Investors want to be paid their return)
  - If a project runs into trouble – investors have incentive to find other managers and make the project work
- Third party input into the project (lender and expert consultants)
- Creates potential additional revenue and/or a taxable project in many jurisdictions
- Long-term management and investment incentives in the projects

What are the Risks

- Market Risks in a long-term RFP Process
- Inability to finance the project
- **Project does not work as intended or the developer does not perform**
- Budget Planning – moving revenues to another party and impacts of losing the revenue
- **Politics and Reputation if something goes wrong on the project**
- **Risk allocation between the parties**
- Regulatory and Budgetary Restrictions for some entities (Some States and Feds) –
  - Know the rules
  - What is the accounting treatment for certain states and feds of the project of certain obligations – especially termination payments
- Third Party liabilities
- **Costs may be higher in the long run**

Typical P3 Process



Procurement
RFQ/RFP
Bidder Meetings
Evaluation
Award
(protests)
Negotiations

Execute P3 Agreement
-Commercial Close
Approvals
Submit financing

Financial Close (within 90 days of commercial close)
-Conditions Precedent need to be met
Update Financial model

Design-Build-Complete
-Construction
-Installation
-Acceptance (regulatory approvals to operate)

Operation Period
-O&M
-Reporting
-Reinvestment
-Handover

Successful Public-Private Partnerships . . .

- Help achieve (realistic) goals through a shared vision
- Provide substantial community/university benefit(s)
- Can be facilitated by an array of financial & non-financial public actions
- Require different & more complex relationships and transactions
- Must be sufficiently profitable for the developer
- Fair deal to all parties

P3 Financing Approaches to Broadband Infrastructure

State of the U.S. (Fixed) Broadband Market

- Source: FCC 2022 Communications Marketplace Report

What is Broadband? – An Evolving Standard

Speed in (Mbps) (download/upload)	Comments
10 / 1	FCC criteria for “served” census blocks for 2020 USF Action (RDOF)
25/3	FCC definition of broadband since 2015; Minimum deployment speed for RDOF awards
100/20	In July 2022, FCC Notice of Inquiry proposed this speed as new standard
940/500	Gigabit speed (Up To)

Speed Characteristics of Fixed Broadband Technology

Technology	Download Speed[1] (Mbps)	Experience Met Consumer Expectations[2]	Residential Connections (millions)
Cable (DOCSIS) 3.1	178	Met or >	71.8
Fiber (FHP)	447	Met or >	24.2
DSL (Copper)	21	Not Met	15.2
Fixed Satellite Service	28	N/A	1.7
Terrestrial Fixed Wireless	63	N/A	2.7

(1) Weighted mean advertised speed as of Dec. 2020
(2) Consumer survey on whether experienced speeds met expectation

Technology Coverage for Residential Fixed Wireless by Provider Footprint

Provider	Footprint Coverage (1)			
	Cable	Fiber	DSL	TFW
Altice	40%	60%		
Charter	100%	1%		
Comcast	100%	0%		
Cox	98%	8%		
AT&T		37%	95% (2)	2%
Frontier		37%	97%	
Lumen		18%	96%	
Verizon		28%	36%	64%

(1) As of 12/31/2021; per FCC, footprint number "likely overstated" due to FCC Form 477 methodology
(2) AT&T discontinued legacy DSL service orders in October 2020.

Understanding Backdrop of Federal USF Subsidy Regime

The federal Universal Service Fund (USF) achieved “nearly” universal deployment of landline voice services in the U.S.

- The DSL infrastructure of the large telecom providers is the remnant of the USF regime

The FCC terminated most legacy USF subsidies from 2011 to 2022 and reallocated these funds to reverse auctions conducted in 2018 and 2020.

- 2018 CAF II Auction – 103 bidders won $1.488 billion to serve 700K households at minimum 25/3 speed.
- 2020 Rural Digital Opportunity Fund (RDOF) – 180 bidders won $9.2 billion to serve 5.2 million households with most receiving speeds of 100/20 Mbps (10 years of funding with six year deployment timetable).

Takeaways from Reform of Federal USF

1. **RDOF reflects end of Federal USF policy**
    - Voice USF framework ended in 2022
    - No successor or replacement policy exists for universal broadband service

2. **Underserved Areas not covered by RDOF lost funding in 2022**
    - DSL infrastructure of large carriers is no longer subsidized by high-cost support
    - Carriers no longer have incentive or obligation to maintain legacy voice services

3. **Will Incumbents upgrade DLS infrastructure to fiber or decommission DSL services?**
    - Incumbents will transition to fiber in markets with sufficient household density
    - Remote/high-cost areas risk loss and decommission of voice/DSL services

The National Broadband Map

- The FCC is transitioning away from historical Form 477 reporting process to collect data on broadband availability
  - New collection methodology referred to as BDC (for Broadband Data Collection)

- The first Broadband Map using BDC data was published by the FCC on November 18,2022 (using BDC data as of June 30, 2022)

- All FCC Broadband Map will be subject to challenge processes.

  Here are the challenge dates for the current Map
  - Bulk challenges began September 2022
  - Individual challenges began November 2022

Access to Public Rights of Way (PROW) – the Public Private "Mandate" of Section 253

Federal law (Sec. 253) preempts any state regulation of public rights of way (PROW) that bars or discriminates against any telecommunications provider in accessing and utilizing the PROW.

- State and local governments retain broad authority over PROW as long as such action does not erect barriers to entry and is competitively neutral

Historically, local governments have licensed PROW to private carriers to deploy telecom infrastructure without retaining ownership of this core infrastructure (conduits, utility poles; aerial and buried cables; repeater stations)

- P3 Infrastructure projects often require local governments to revisit this historical framework and to take greater control (and ownership) over broadband infrastructure deployed in PROW

Local governments should confirm policies ensure efficient access to PROW

- Reasonable timetables and fees for permitting
- Consider "dig once" policies

Navigating State Law Issues

Local Authority - P3 Broadband Infrastructure projects require understanding of state law authorizations of local government authority including:

- Authority to own, construct, finance, lease and operate infrastructure;
- Competitive bidding process for granting exclusive or preferred long term rights;

Municipal Broadband Statutes – Many states restrict the ability of local government to engage in broadband infrastructure projects including:

- Direct prohibitions on provision of broadband, telecom, and video services (retail and wholesale level)
- Bureaucratic restrictions designed to eliminate unfair competition;
- Requiring political referendums to approve activity.

Pole Attachment Rights

Federal law mandates access to utility poles, conduits and PROW to providers of telecommunication and cable services:

- Ensures just and reasonable rates, terms and conditions to pole attachers;
- Covers investor-owned utilities (electric and incumbent telcos), but not cooperatives;
- Each state can opt out of federal regime and provide its own regulatory scheme.

Pole attachment regimes present numerous issues for P3 infrastructure including:

- Local government right to access poles without becoming "eligible telecommunications carrier" or certificated carrier;
- "Last party to attach" often bears costs of replacing poles and relocating previous attachers.

Conclusions

Successful Public-Private Partnerships . . .

- In Broadband – know the authorities
- Explore all options for the project
  - Traditional financing
  - Hybrid approach
- Understand your organizations limitations
- Understand your constituents short and long-term needs
- Understand the market at the time of the decision to go with a P3 and at closing
- Understand the transaction and long-term actual costs
- Pick the Partner with actual experience in the area that you are creating the project
- No such thing as an easy P3 transaction

Successful Public-Private Partnerships . . .

- Clearly identify responsibilities of the parties
  - Negotiate the allocation of payments/costs/liability
- Include Clear Project definitions and deadlines
- Provide flexibility to operate the project
- Recognizes that plans will change and requirements will change over time
- Consider the users of the project and their needs
- Recognize that most developers will sell the project in the future to investors (equity holders) and may need to issue future debt.

- **Availability Payment**
  Long Term – 25 years or more

  Payment risk prior to construction completion on contractor

  Clear Scope (May have multiple phases)

  Regular investment through the term of the Agreement – end of term – operating facility

  DBM/DBOM/DBFOM/DB

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Concession

- Typically construct and operate the broadband infrastructure and O&M and upgrade and maintain – sell services to customers
- Term – Long term (recover investment and profit)
- Paid for delivery of services
- Price for services can and typically does change over time (include parameters in the contract)
- Risk of ownership (but not all costs)
- Future Capital Investment
- DBFOM or OM (with long term upgrades) Delivery

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Recommendations on Implementation

Select an Experienced Partner

Prioritize government's goals for the project

Agreement

Create accountability measures for meeting goals

Create teams and develop expertise to implement the Project

In an availability payment structure – the payment terms and processes must be clear

Acknowledge

Acknowledge P3s are not easy and have a team available to assist to represent the government needs throughout the process – a government Technical Team

Budget - internal costs (post closing) are real for the government

Utilize

Staff and your partner to ensure that the implementation and long-term management and maintenance are going smoothly

Touch base regularly

Take Action

Focus on what can be done.

Partner should be assisting through process

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Questions?

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P3 Financing Approaches for Broadband Infrastructure

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Lit Communities

Public-Private Partnership Case Studies: Lit Communities

Lindsay Miller, President
Lit Consulting

February, 2023

We do things differently.

We partner with municipalities to build fiber networks in a way that keeps the community's needs front and center every step of the way.

Action Plans, Not Feasibility Studies

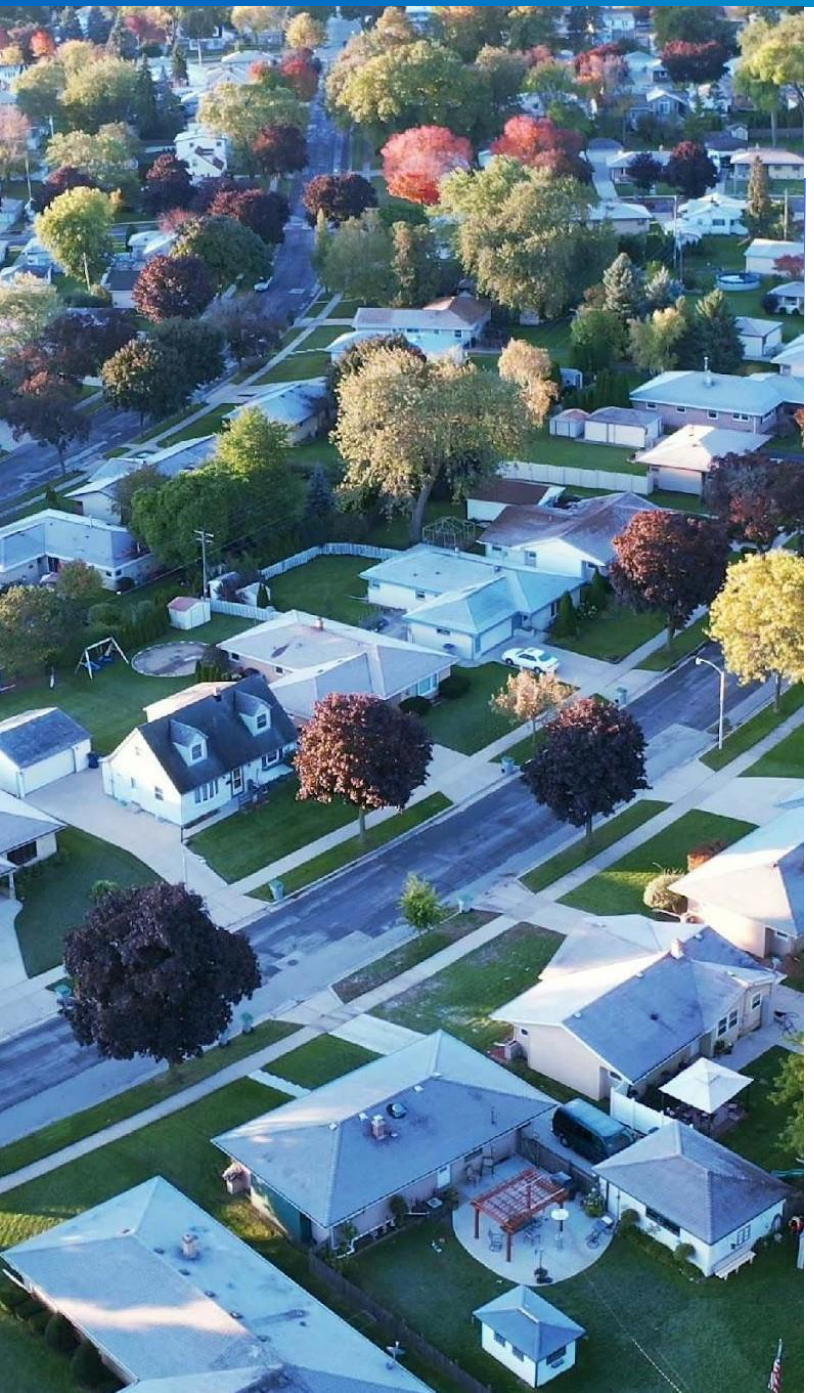
Our community assessments are comprehensive and specific, so you have a clear plan forward to a sustainable fiber network

Local Companies, Local Employees

We don't manage your network from some faraway city. We build and operate an ISP in your community to employ your residents and guarantee excellent service.

Open Application Networks

We invite community-oriented companies to bring you telehealth services, smart city applications, and other modern solutions over the network we build.



Bridging the Digital Divide In Your Community

Municipal leaders have questions:

- What would a solution look like?
- How much would a fiber network cost?
- Would our community support this?
- How would it be funded?

Lit Communities provides answers!

Lit Fiber Medina

NETWORK LOCATION
Medina County, OH

SIZE (LAST MILE)
450 miles of fiber

BUDGETED COST
$58mm

SCOPE
Business Plan, Road Map and Deployment for approximately 50,000 residents and businesses

DATE
July 2017 – Present

ANTICIPATED COMPLETION
48 months

NETWORK TYPE
Aerial & Underground

INITIAL SERVICES
Internet: 100/100 Mbps, 250/250 Mbps, 1 Gig

Public-Private Partnership

- In 2010, the Medina County Port Authority bonded a broadband project, Medina County Fiber Network (MCFN), to create the infrastructure for robust broadband service that could be shared by multiple telecommunications carriers as part of driving economic development within Medina County.
- The MCFN created a strategic plan in 2017 that addresses expansion of certain fiber trunks into industrial parks and to introduce a residential and small business fiber product through commercial partnering.
- In 2021, a relationship was created with Lit Fiber Medina, to introduce a residential and small business offering to Medina County. **Lit Fiber is partnering with MCFN, leasing strands to build last mile connectivity to the residents and small businesses of the County.**

Lit Fiber Brownsville

NETWORK LOCATION
Brownsville, TX

SIZE
Middle Mile: 100 Miles
Last Mile: 550 miles of fiber (planned)

BUDGETED COST
Middle Mile: $19.5 Million
Last Mile: $70 Million

DATE
July 2020 – Present

SCOPE
Broadband Feasibility & Digital Inclusion Plan and Planned FTTP Deployment in 2022

ANTICIPATED COMPLETION
Middle Mile: 24 months
Last Mile: 36 Months

NETWORK TYPE
Aerial & Underground

Public-Private Partnership

- Recognizing that nearly 67% of Brownsville's residents lacked internet access, the City established a partnership with seven community anchor institutions to fund the Broadband Feasibility and Digital Inclusion Plan to study and address the lack of broadband in the community. In July 2020, Lit Communities began working with the City to develop its plan, which involved developing recommendations for both Middle Mile and Last Mile network deployment opportunities.
- The City's plan resulted in a decision by the Brownsville City Commission to invest $19.5 million in American Rescue Plan Act funding to develop its own 100-mile Middle Mile backbone network which will connect community anchor institutions including City facilities, Police, Fire, EMS, public parks as well as select Brownsville Public Utilities Board locations.
- Additionally, the City's Middle Mile network will enable private providers to partner with the City of Brownsville to deploy Last Mile services throughout the community. Currently, the City's Middle Mile network is in the Planning and Permitting Phase, with construction set to begin in Q1 2023 and conclude within a 24-month period.
- **Through a competitive process that was completed in March 2022, Lit Fiber was selected by the City to serve as its private partner in a Public-Private Partnership to deploy Last Mile services for Brownsville's residents and businesses.**
- In July 2022, the Public-Private Partnership agreement was mutually executed between the City and Lit/BTX Fiber to enable deployment of both the Middle and Last Mile network deployments.

Lit Fiber York

NETWORK LOCATION
York County, PA

SIZE (LAST MILE)
3,125 miles of fiber (planned)

BUDGETED COST
$284mm (planned)

SCOPE
Community Assessment, Pilot Middle Mile and Wireless Project and Planned FTTP Deployment in 2022

DATE
October 2020 – Present

ANTICIPATED COMPLETION
56 months

NETWORK TYPE
Aerial & Underground

Public-Private Partnership

- According to the 2019 American Community Survey, 18.4% of households in York County are without broadband internet access. As a result, nearly a fifth of the County's residents struggle to access the internet, conduct personal business or complete schoolwork.
- Recognizing the severity of this problem, the County utilized $1.3mm in COVID-19 CARES Act funding to complete its Broadband Community Assessment and 16-mile Rail Trail Pilot Project to begin addressing the lack of broadband in the community.
- In October 2020, Lit Communities began working with York County on a Countywide Community Assessment and strategy for a fiber-optic network owned by both the public and private partners, including last mile fiber to the premise.
- Currently, the County is embarking on a multi-year effort to develop its own 333-mile middle mile backbone network utilizing up to $25mm of American Rescue Plan Act funding, allowing for further opportunities to work with private partners to deploy last mile services in priority areas of the community.
- Additionally, the County's proposed network will connect 285 anchor institutions including, 38 Emergency Medical Service facilities, 74 Fire Stations, 33 Police Stations, 121 Schools, and nineteen 911 towers.
- In June 2021, the Commissioners allocated up to $25 million in federal American Rescue Plan Act funds to help close the digital divide for the estimated 25 percent of County residents who lack high-speed internet access.
- **In July 2022 the County unanimously approved recommendations advanced by the YoCo Fiber Broadband Task Force to expand broadband infrastructure in York county by selecting Lit Fiber to oversee the design and construction of a County owned middle mile network as well as become a service provider to underserved communities along the heritage rail trail.**

Monongalia County, WV

NETWORK LOCATION
Monongalia County, WV

SIZE (LAST MILE)
1,268 miles

BUDGETED COST
$149,719,385

SCOPE
Community Assessment, Municipal Middle Mile Network, Last Mile Pilot Project, Wireless Assessment

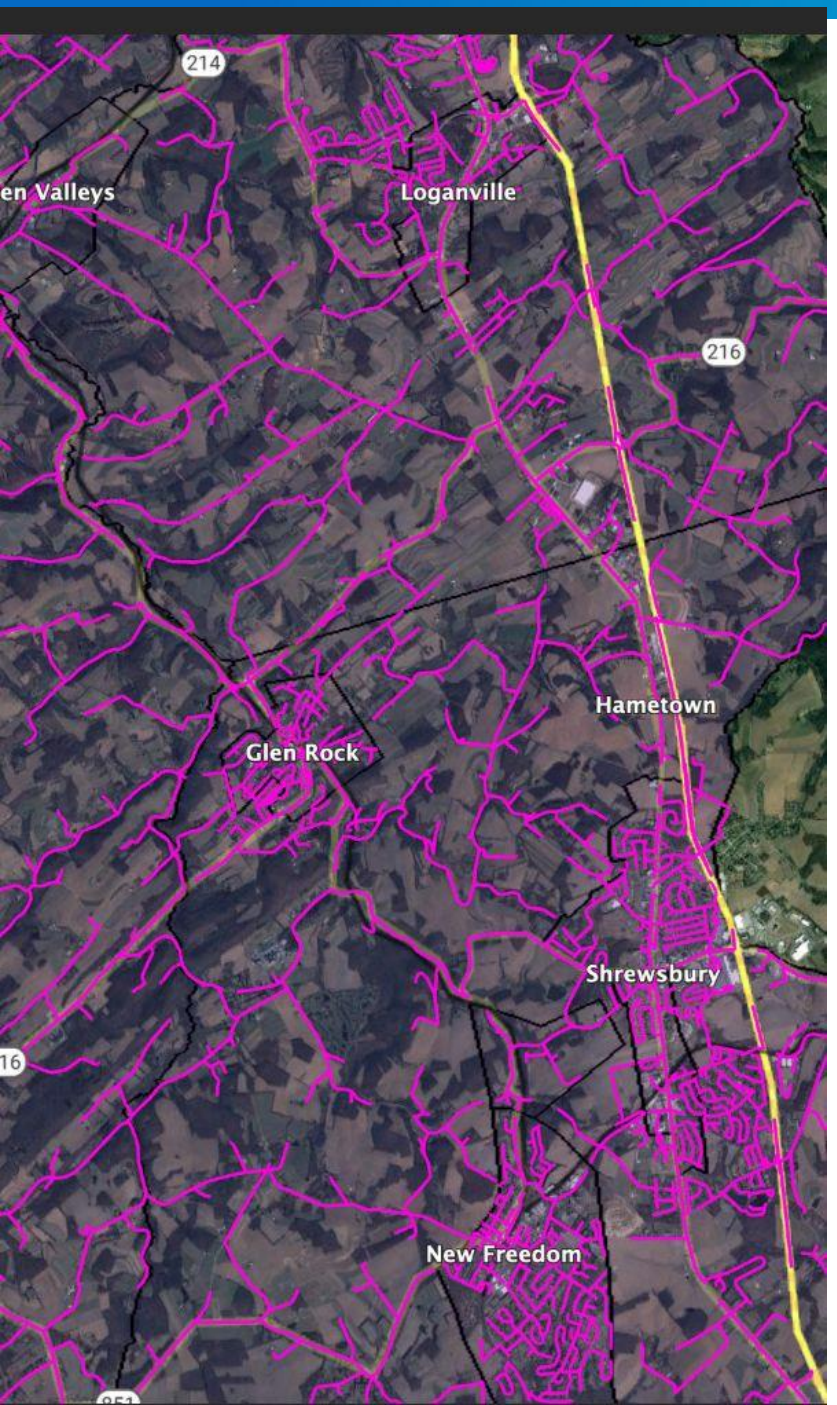
DATE
June 2021 – present

ANTICIPATED COMPLETION
48 months

NETWORK TYPE
Aerial and Underground

Assessing Future P3s

- Lit Communities in partnership with Ice Miller and DLZ performed a broadband feasibility study to help the Monongalia County Commission determine next steps to take in order to resolve connectivity issues throughout Monongalia County. During the study, the western part of the County was identified as a priority area with 65% of survey respondents reporting service at less than 25/3.
- The Monongalia County Commission has begun work on a 15-ring municipal middle mile network that will run throughout the County and be available for last mile providers. This will enable more ISPs (hopefully) to expand their networks to connect more residents.
- The County will also be connecting 132 anchor institutions and potentially **working with 5 to 10 utility and energy companies established in Monongalia County on this project. These companies are offering ROWs and Easements to assist with a more rapid and cost-effective build out of the middle mile network.**
- The County is working with Lit Communities on Phase 2, which includes detailed design and engineering for one or two rings, a last mile pilot project off of one ring, and a wireless assessment for the western part of Monongalia County.



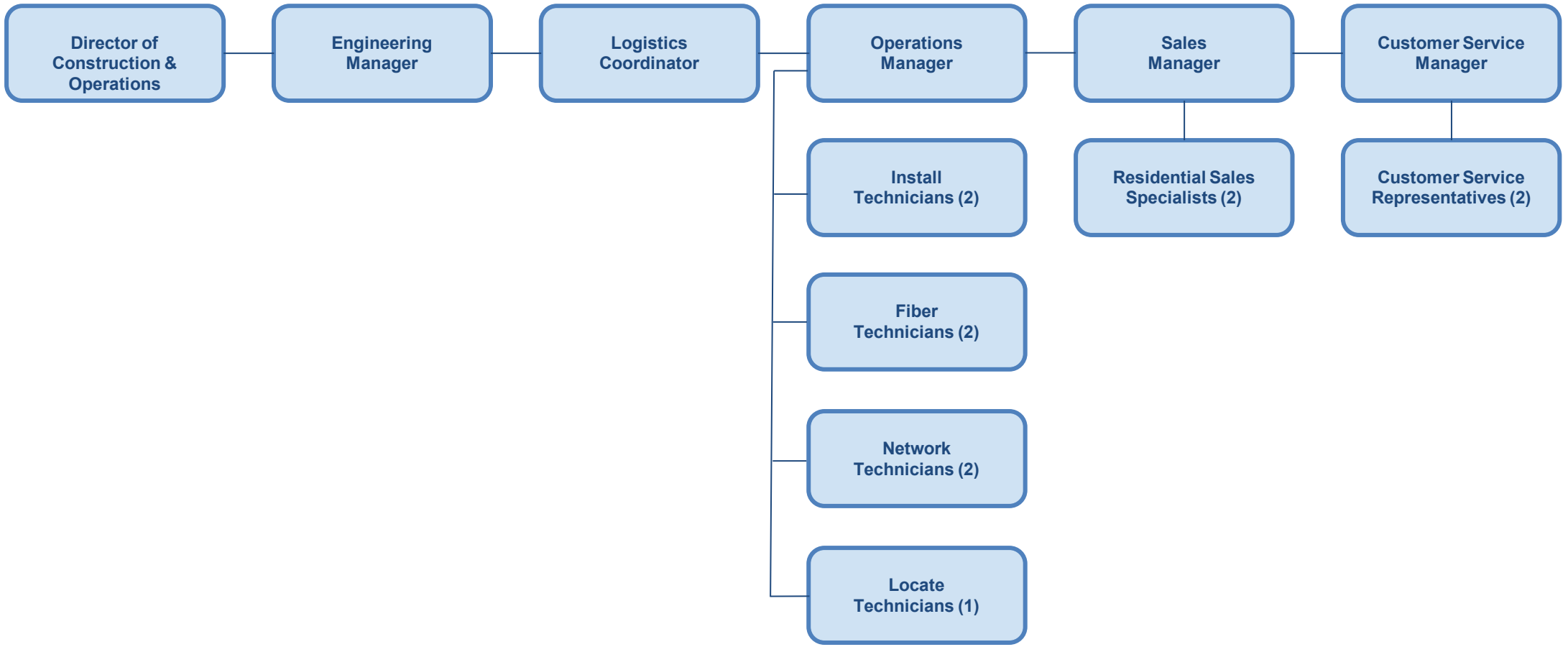
Last Mile Broadband Services

Key Differentiators:

- Local Branding
- Demonstration Centers
- Unmatched Speeds / Services
- Capital Partners
- Local Knowledge

Lit Communities is built on partnerships!

Local Team Organizational Chart



Open Application Network

Stronger Partnerships

Open for Innovation

Built for Smart Cities

Open Application Networks are designed to support telehealth services, smart city applications, and other innovations that better your community.

Local ISP and Team

Branded for You

Give your residents a community-focused ISP.

Locally Operated

Create local jobs and keep network influence in the community.

Expert Support

Retain access to best-in-class experts, software, and strategies.

Questions?

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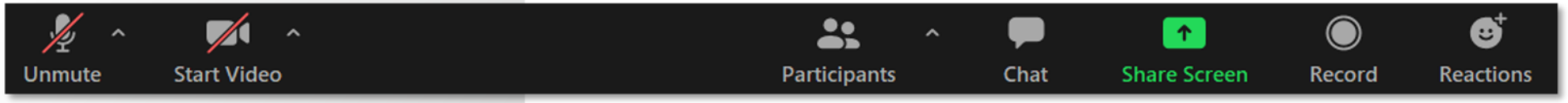
Lit Communities

Audience Questions



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CDFA Food Systems Finance Webinar Series: Bonds & Food Systems
February 28, 2023 // 2:00 - 3:30 PM Eastern

CDFA-Bricker Webinar Series: Current Landscape of Public Incentives and Financing Options for Green & Sustainable Assets
March 7, 2023 // 2:00 - 4:00 PM Eastern

Intro & Advanced Bond Finance Courses
March 13-14 & March 15-16, 2023 // 12:00 - 5:00 PM Eastern

CDFA // BNY Mellon Development Finance Webcast Series: Exploring 501c3 Bond Finance for Nonprofit Organizations
March 21, 2023 // 2:00 PM - 3:00 PM Eastern

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