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Broadband Feasibility Study

City of Spring Hill
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BACKGROUND AND METHODOLOGY

Background and methodology

Explore the technical and financial implications of deploying a citywide ultra-high-speed fiber-based broadband network

- Consulted with City staff
- Researched available broadband service
- Considered impact of broadband
- Evaluated potential business models
- Examined alternative approaches
- Developed cost estimate
- Developed pro-formas
- Developed dig-once policy

FIBER CONSTRUCTION COSTS

Fiber construction costs

OSP will cost $4.8 million
- $1,700 per passing

All-underground OSP will cost $5.8 million
- $1,930 per passing

Total deployment costs will vary based on elected business model

Construction and Electronics Required to Activate a Subscriber	Estimated Average Cost
Drop Installation and Materials	$1,590
Subscriber Electronics (ONT and OLT)	240
Electronics Installation	200
Installation Materials	100
Total	**$2,230**

MIDDLE-MILE NETWORK

Middle-mile network

$1.18 million initial investment

- $12,000 annual O&M
- $82,000 annual P&I
- $94,000 annual cost

City contribution of $1 million over 20 years will generate $34,000 annual shortfall

POTENTIAL BUSINESS MODELS

Business models

C = City responsibility; P = Partner responsibility; RSP = Retail Service Provider responsibility						
Business Model	**OSP**	**OSP Maintenance**	**Drops**	**Core Electronics**	**CPE**	**Backhaul**
Huntsville (Dark FTTP)	C	C	P	P	P	P
Westminster (Dark FTTP)	C	C	C	P	P	P
Open Access (Lit)	C	C	C	C	RSP	RSP
Municipal Retail (Lit)	C	C	C	C	C	C

Total deployment costs depend on City's chosen model

Huntsville and Westminster models

- Huntsville
  - $4.8 million deployment
  - 3.7 times Google fees
- Westminster
  - $6.4 million deployment
  - 2.6 times Ting fees
  - 35 percent take rate

Municipal retail model

- Data-only
  - 67 percent take rate
- "Triple play"
  - 65 percent take rate
- Three-month operating reserve
  - 68 percent take rate
- Add 700 passings by year five
  - 56 percent take rate

$9.9 million to deploy

- 67 percent take rate

1 Gbps $90 per month

$75 connection fee

Open-access model

- Costs will be comparable to retail model
- 67 percent take rate
  - $75 connection fee
- $69 per residential subscriber per month
- $79 per business subscriber per month

FINDINGS AND CONCLUSIONS

Summary of findings

1. Spring Hill faces a challenge of scale

2. City may need to consider dark FTTP deployment

3. Wireless will not accomplish City's goals of ubiquity

RECOMMENDATIONS

Summary of recommendations

1. Consider dig-once policy

2. Focus on actions that will attract investment in Spring Hill

3. Participate in formal procurement

Recommendation: consider dig once

Long-term strategy to address telecom crowding in rights-of-way and to facilitate deployment

Reduces construction cost through scale economies

1. Coordinate fiber and conduit construction with utility construction and other disruptive activities in rights-of-way
2. Construct spare conduit capacity where multiple service providers or entities may require infrastructure

Recommendation: focus on attracting partners

Private sector may help move the needle

- Build middle-mile network
- Ease access for private providers through policy changes
- Streamline City processes
- Provide access to City facilities

Recommendation: participate in formal solicitation

The City will find more value in discussions that clearly articulate what it is offering

- RFI or RFP?
- Discuss goals and non-negotiable items
- Offer City assets
- Focus on pragmatism and true partnership

Q & A