

**Presented by Wayne Strickland
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Regional Commission**

**VAPDC Summer Conference
July, 2017**

Broadband Authority

- Local governments asked the Regional Commission to coordinate a Broadband Task Force composed of public and private sector representatives.
- Recommended by a Broadband Task force in 2012-2013.
- Created by four localities in 2013 under the Virginia Wireless Services Authority Act
- Organization developed similar to the structure of our regional Water Authority
- Board of 5 members. (Four local governments and one citizen member)



The Plan

The primary goal of the Authority is to improve affordable broadband services in the Roanoke Valley by encouraging collaboration, competition, and long term investments.

2013 Task Force: 15-20 recommendations

“Fewer words; more action!”

In 2014, the RVBA hired a consultant to develop a business plan for the operation of a small network

Initial SWOT Analysis

Strengths

- Shared Understanding
- Existing Assets
- Capabilities
- Massive ROW
- Demographics
- Market Acceptance

Opportunities

- Growing Markets
- Additional Stimuli
- Receptive Markets
- Collaboration w/ other Regional Initiatives

Weaknesses

- Capital Constraints
- Needs of Major Users being served
- Unserved Markets
- Inexperience

Threats

- Incumbents?
- Community Expectations
- Market Changes
- Emerging Technology

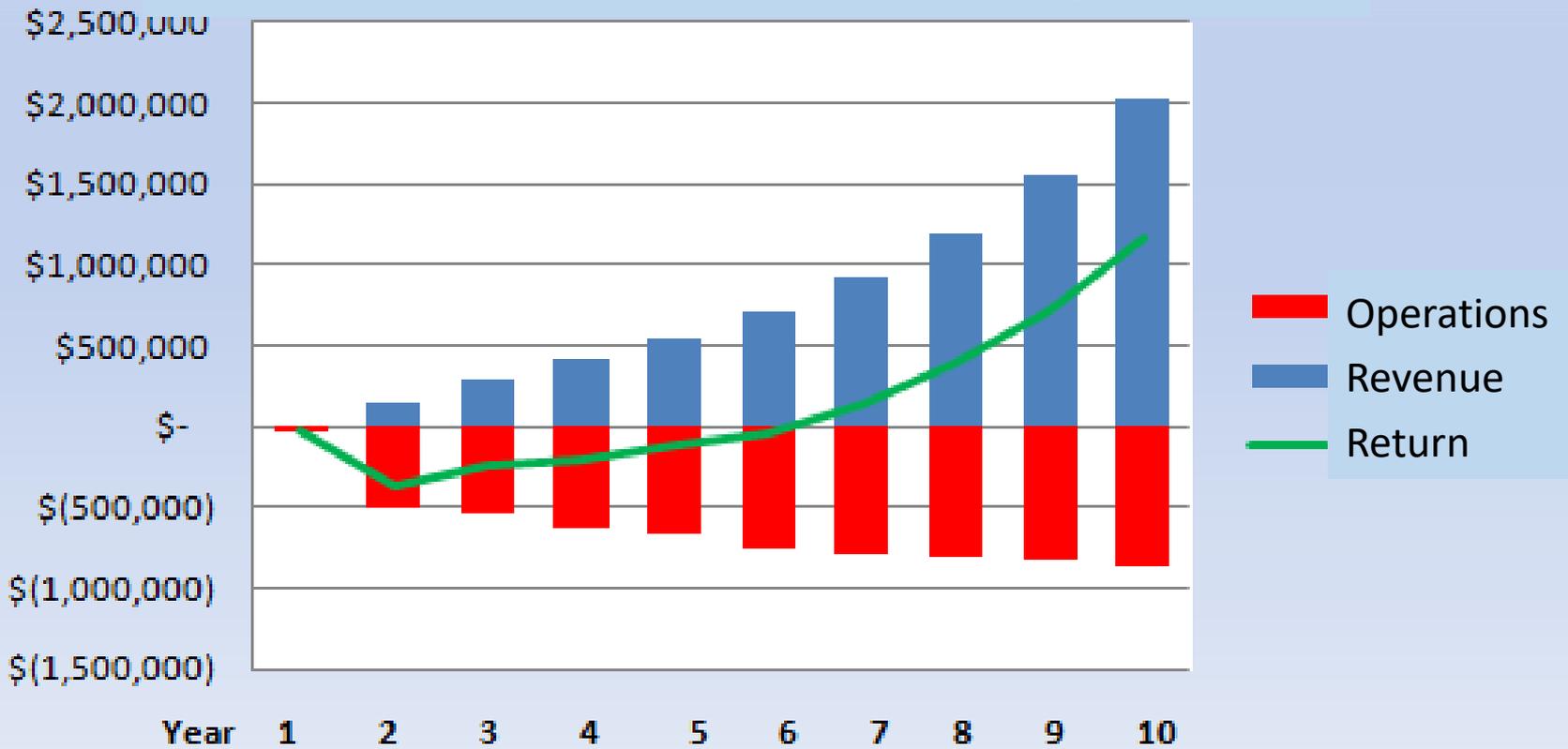
Vertical Markets-Initial Concerns

- The RVBA is an unknown and unproved entity
- To the telecommunications community we are similar to *vaporware*
- To the community of potential customers we present great risk
- We must establish our credibility as a carrier-class operator
- Political opposition came from a local government elected official and incumbents
- We focused on three vertical markets -- for starters:
 1. Industrial and business parks
 2. Important collocation centers
 3. Schools/Government facilities(opportunistically)

Approach

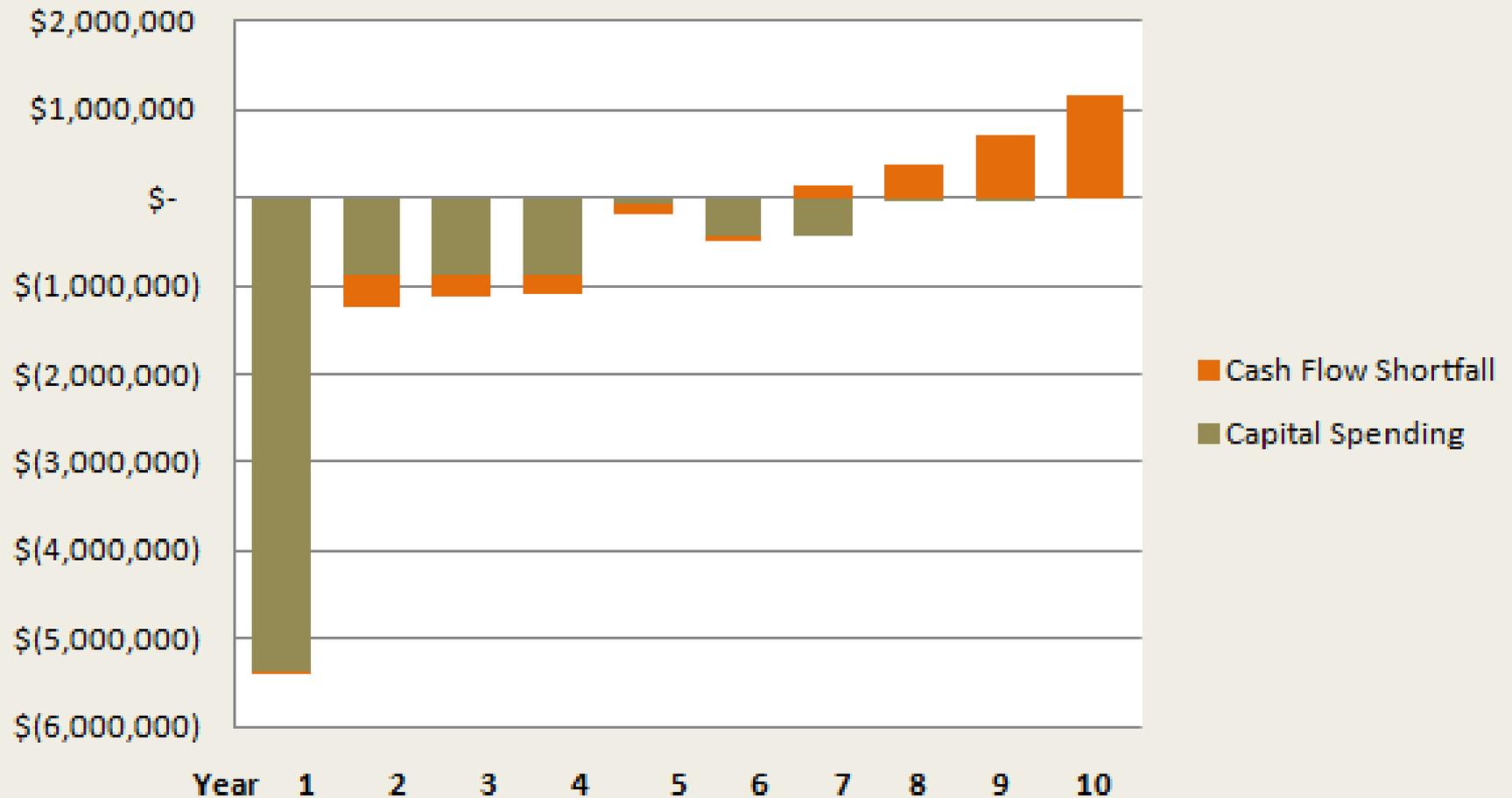
- Identified 94 priority sites in 2014 (now up to 225+)
 - 16 business parks
 - 6 Important collocation areas (1 site coincident with bus park)
 - 73 schools
- Identified large and prominent potential customers
- Started network design at the nearest carrier collocation point to access the known demand
- Built the network to reach the business parks and collocation centers
- Passed schools where practical
- Utilized the existing facilities at Salem Electric Department for our principal Network POP
- Did not anticipate providing residential services
- Sought to find an operator, but are now operating network on our own.
- Obtained VRA bond funding for Phase I and Phase II

Roanoke Valley Broadband Authority

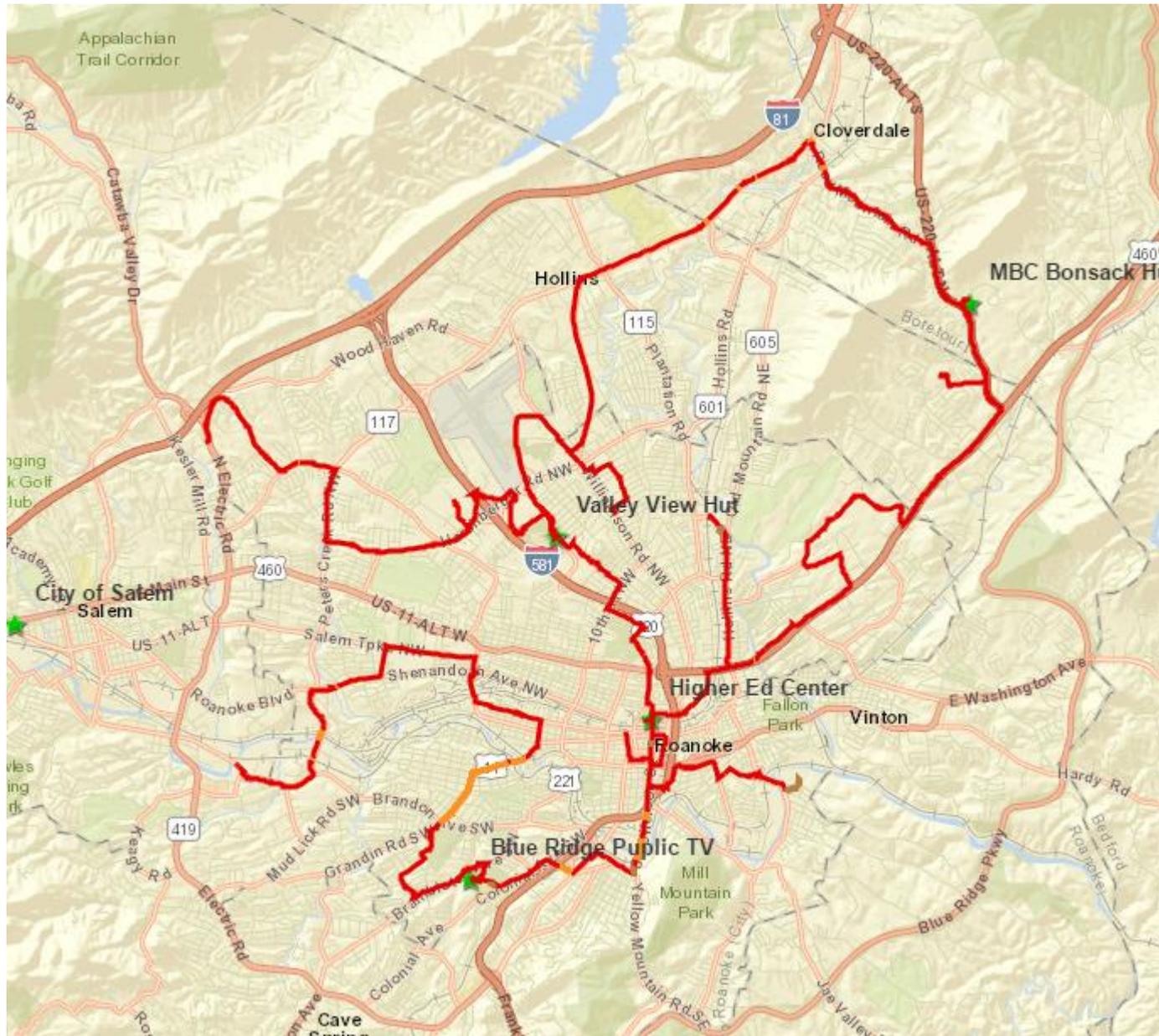


Project Attractiveness: IRR = 4%

Capital Requirements of RVBA



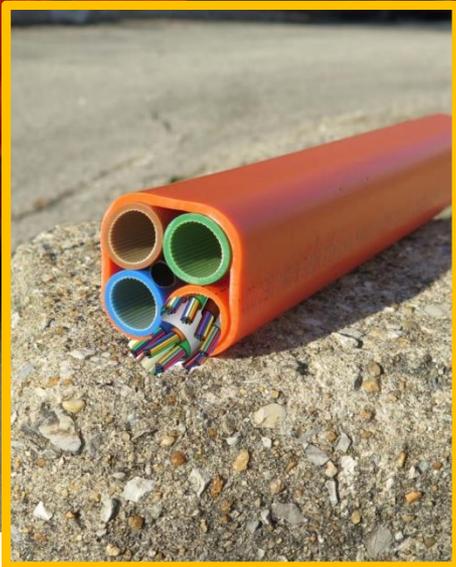
In 2015-2016 - 50 Mile Network was constructed



Achievements

- Hired a President and CEO
- Hired a Vice President of Engineering
- Hired a financial/HR/ and Administration Director
- Sub-contract repair, installation and network monitoring
- Sub-contract advertising, website and other marketing.
- Phase I became operational in the Spring of 2016.
- Have 10-20 large business customers with more in the pipeline.
- Faced uncertainty with state legislation introduced to restrict municipal broadband.
- Working with municipalities and schools on a regular basis.
- On track with original financial plan.
- Received positive state and national press coverage.

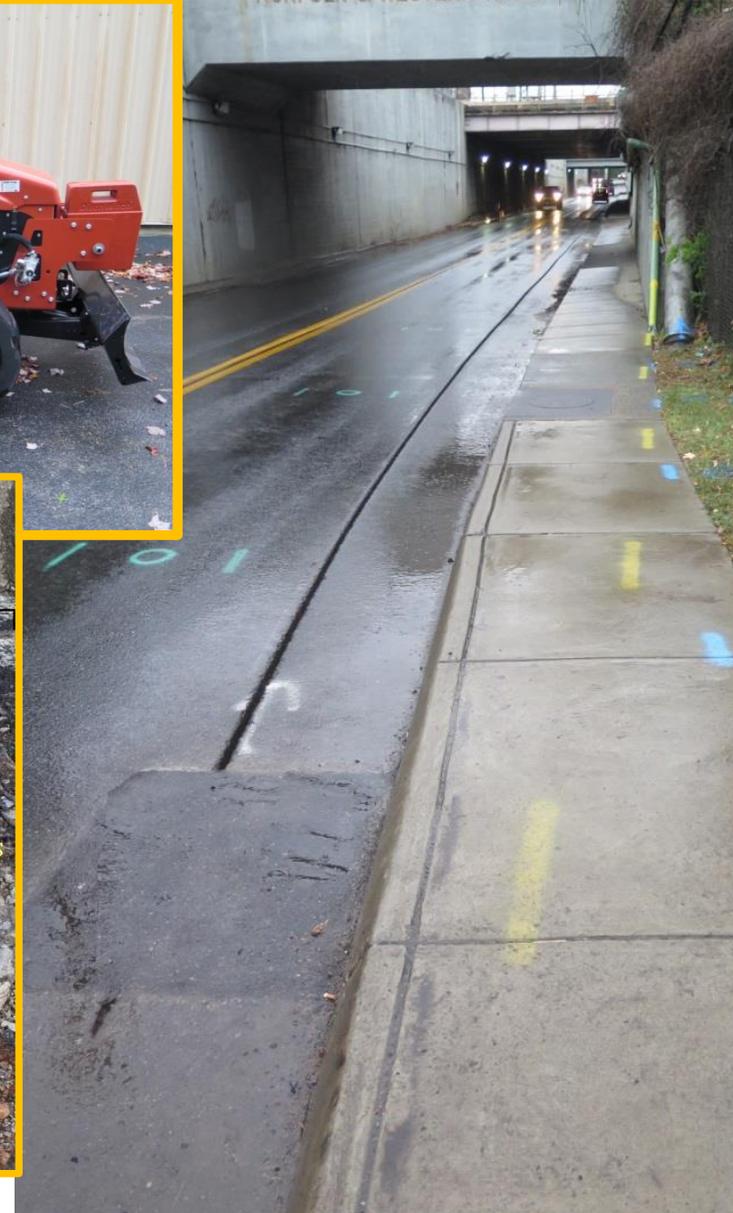
4 Way Future Path Conduit



Buried Conduit

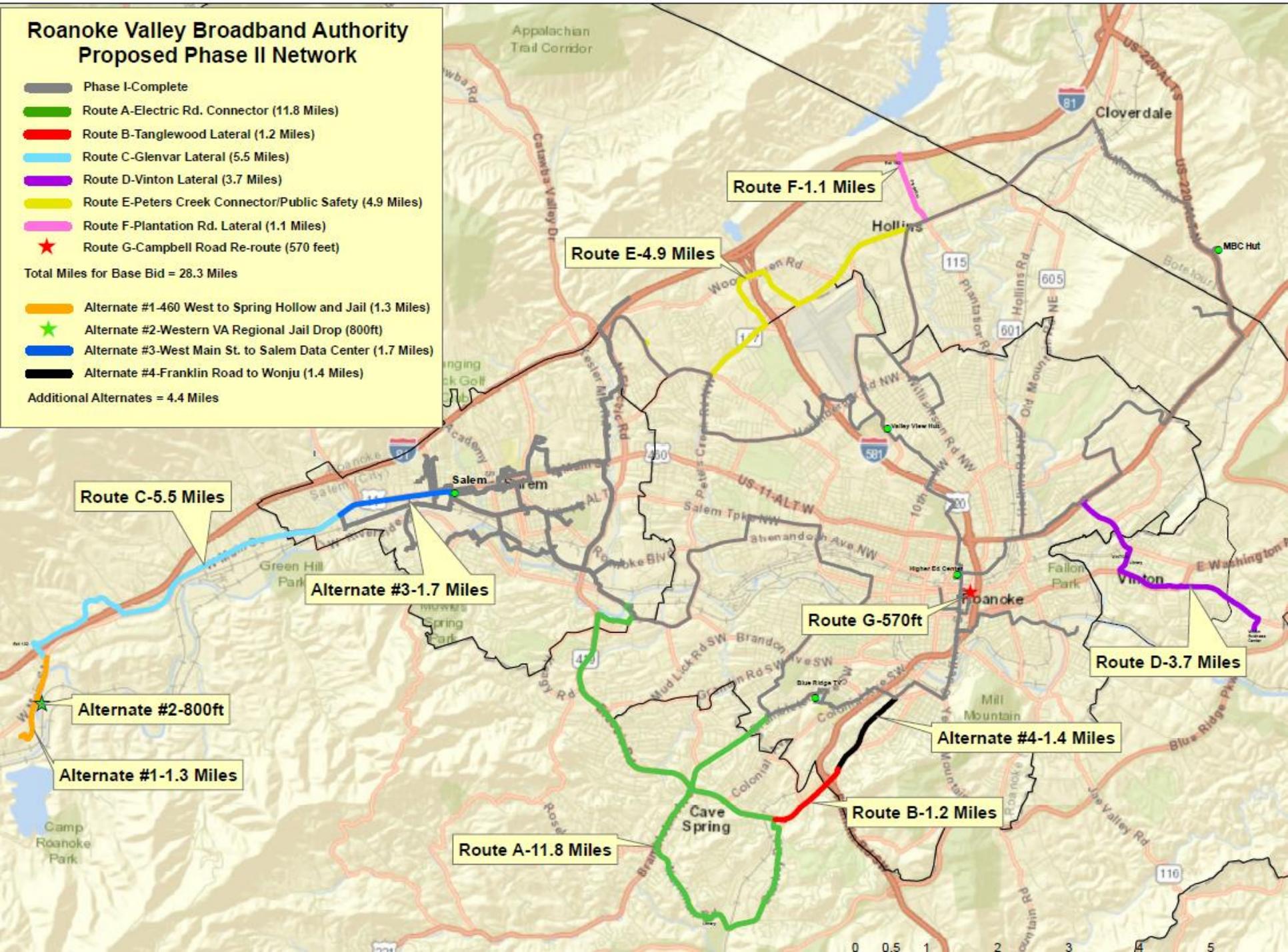


Micro Trenching



Roanoke Valley Broadband Authority Proposed Phase II Network

- Phase I-Complete
 - Route A-Electric Rd. Connector (11.8 Miles)
 - Route B-Tanglewood Lateral (1.2 Miles)
 - Route C-Glenvar Lateral (5.5 Miles)
 - Route D-Vinton Lateral (3.7 Miles)
 - Route E-Peters Creek Connector/Public Safety (4.9 Miles)
 - Route F-Plantation Rd. Lateral (1.1 Miles)
 - Route G-Campbell Road Re-route (570 feet)
- Total Miles for Base Bid = 28.3 Miles
- Alternate #1-460 West to Spring Hollow and Jail (1.3 Miles)
 - Alternate #2-Western VA Regional Jail Drop (800ft)
 - Alternate #3-West Main St. to Salem Data Center (1.7 Miles)
 - Alternate #4-Franklin Road to Wonju (1.4 Miles)
- Additional Alternates = 4.4 Miles



Route C-5.5 Miles

Alternate #3-1.7 Miles

Alternate #2-800ft

Alternate #1-1.3 Miles

Route A-11.8 Miles

Route E-4.9 Miles

Route F-1.1 Miles

Route G-570ft

Alternate #4-1.4 Miles

Route B-1.2 Miles

Route D-3.7 Miles



How the Regional Commission is supporting Broadband in our rural areas:

- Conducted a study of current conditions and created realistic goals.
- Leverage an open access network that passes through the region for economic development (example, MBC in our area).
- Providing incentives to attract new wireless providers to the region (example, free space on an existing water tower).
- Working with existing providers to expand services.
- Working with school systems to provide access for students at home (example, mobile hot spots for unserved areas).
- Coordinating with public safety departments on tower deployments (example, E911).

It's important at times to work with existing providers

- Communicate with existing providers!
- Find grants and incentives to encourage existing providers to expand service areas. (example., VA Dept. Housing & Community Development funds now go to private providers that partner with a locality for example)
- Existing providers may be willing to help test new technologies.
- Invite new providers to the region to fill gaps in service. (Wireless providers for example)
- Provide incentives to attract new providers. (Space on towers for example)
- Help document and market existing infrastructure as an asset.

Questions?