

Kaysville Broadband Study



Work Activities

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- Survey residents and businesses on broadband needs and interests
- Develop cost estimates for fiber to all homes and businesses
- Recommend a technical design for the proposed network
- Evaluate and recommend City options for business model
- Develop business and financial plan that provides long term sustainability for the network

Broadband Background

- Over the past 20 years, broadband and Internet access have become essential infrastructure
- Improved service supports business and personal needs
 - Telemedicine, telehealth, and longer independent living for older residents
 - New work from home and business from home opportunities
 - Better support for K12 and higher ed students
 - Improved delivery and support of City services
- More than 85% of Kaysville businesses and residents want better Internet

Kaysville Business Survey Results

- 88% want better Internet access.
- 96% indicated that the Internet is important to the success of their business over the next five years.
- 41% of businesses that responded are home-based.
- 54% of businesses that responded need employees to be able to work from home.
- 89% of businesses agreed that the City should help facilitate better Internet services.

Kaysville Residential Survey Results

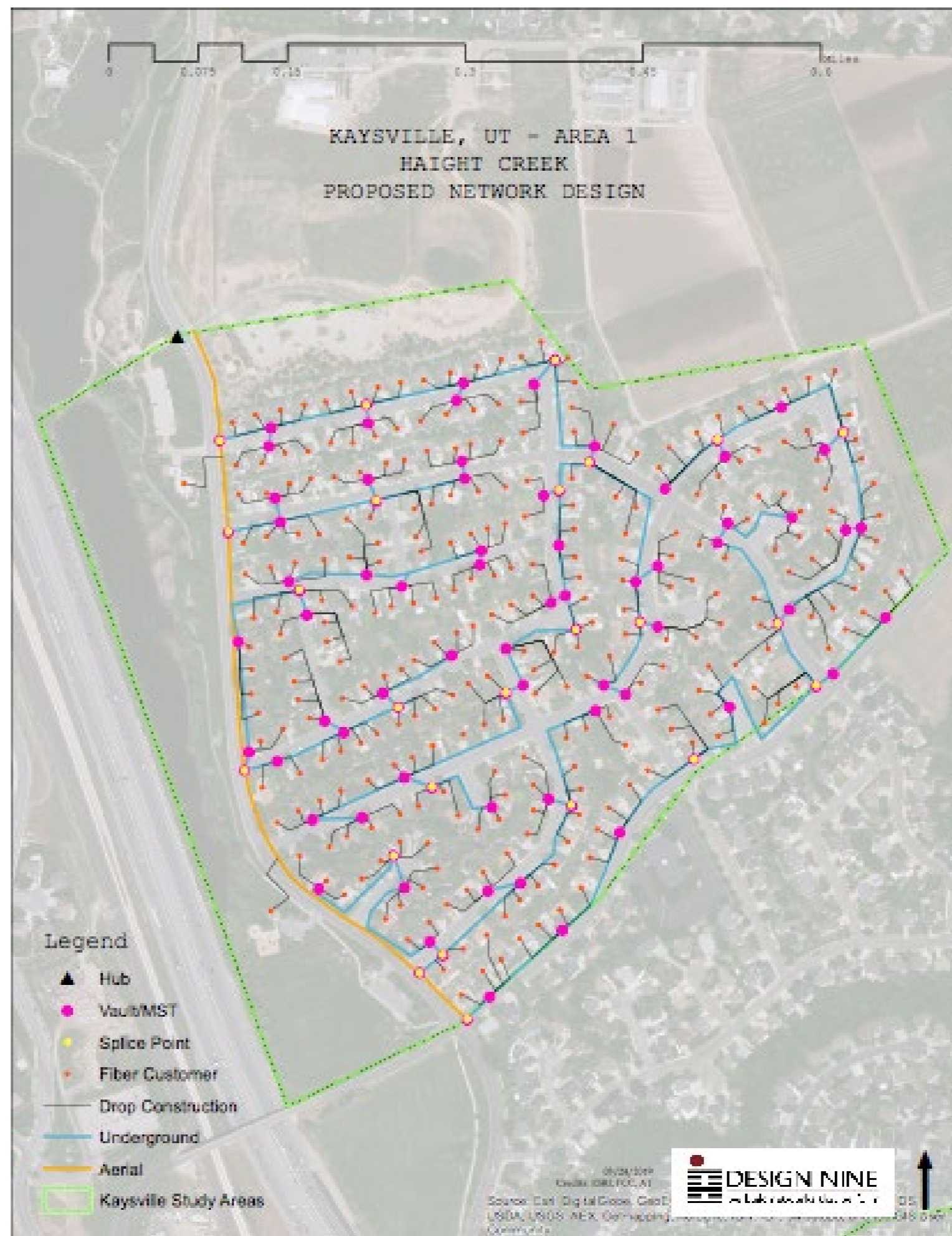
- 87% want better Internet service.
- 81% agreed that the City should help facilitate better Internet service.
- 41% of residents have 9 or more Internet-connected devices in their home.
- 58% indicate that availability of broadband Internet is affecting where they choose to live.

Cost Estimate Development

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- Several different Kaysville neighborhood and commercial areas were sampled
- Both aerial and underground utility areas were sampled
- Full fiber layouts were completed
- Costs for each study area were extrapolated to produce a City-wide cost
- Cost model includes passing every home and business with Gigabit fiber

- Fiber layouts included fiber past each premises, handholes, splice points, and fiber connections to each building



Network Design

- Fiber to all homes and businesses
- 10Gig fiber GPON in residential areas, Active Ethernet availability in commercial/industrial areas
- Symmetric service supported
 - Equal upload and download speeds—very important for businesses and work from home and business from home
- Fiber future-proofs Kaysville
 - Fiber creates a 40 year asset that will support any and all services far into the future

Network Design

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- Aerial fiber where utilities are already on poles
 - Less expensive
 - Supports a very rapid build out, with many homes and businesses getting service quickly
- Underground conduit/fiber in areas where utilities are underground
 - More expensive
 - Less likely to be damaged
- Many areas will have redundant fiber rings
 - Fiber cable damage will not interrupt service

Business Model Recommendation

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- City will not compete with the private sector
- City will invest in basic infrastructure and make it available to private sector service providers
- City will not sell any services, only private sector providers
- This wholesale infrastructure model offers choice of providers and choice of services and prices
- Comcast and CenturyLink will be invited to use the network to provide services to existing and new customers

Business Model Recommendation

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- Two options for the City
 - *Subscription-based connection fee*
 - Service providers pay for access based on number of customers they have
 - Higher financial risk for the City, must rely on providers to generate revenue to support infrastructure operating costs
 - *Utility-based connection fee*
 - Every household pays a small amount to support the network operating costs—minimizes financial risk to the City
 - Similar to support for roads, libraries, schools, playgrounds...
 - Service providers pay a flat fee for network access

Summary

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- Fiber has become an essential utility like water and sewer
- Critical to long term prosperity of the community
- The utility fee model will:
 - Provide choice of providers and services
 - Minimize financial risk and ensure long term financial sustainability
- Typical residential service cost for monthly utility fee and a 250 Meg down/250 Meg up package of Internet should be \$55 - \$65