

UTAH BROADBAND CENTER CONNECTING UTAH

SIX COUNTY ASSOCIATION OF GOVERNMENTS (AOG) LOCAL BROADBAND PLAN



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EXECUTIVE SUMMARY

The Six County area, located in central Utah, comprises six counties: Juab, Millard, Piute, Sanpete, Sevier, and Wayne. This region is known for its scenic landscapes, including national parks, forests, and recreational areas. The area is predominantly rural, with a population that relies on various industries such as agriculture, mining, manufacturing, and tourism. Access to high-speed broadband is an important issue in the Six County area, with efforts being made to expand and improve connectivity. The local communities recognize the significance of broadband infrastructure in promoting economic development, education, health care, and overall quality of life and are working towards addressing challenges, including broadband access, to ensure a thriving and inclusive future for residents and businesses in the region.

VISION

Promote social and economic growth throughout Juab, Millard, Piute, Sanpete, Sevier, and Wayne Counties by investing in broadband infrastructure that is accessible, modern, and scalable and provides communities with equitable opportunities to participate in the current digital economy.

	Availability		Rural Setting		Funding and Costs		
KEY BARRIERS	Reliable high-speed internet is not available in all locations within the Six County region		Rural settings with low population have not been a priority market for ISPs		With middle mile needs and mountainous geography, installation costs are cost prohibitive		
COVERED POPULATIONS	Individuals who primarily reside in a rural area	Individuals Aging ac who live in low-income households		Aging adults	Indi who mer a ra ethr min grou	viduals o are mbers of icial or nic ority up	Veterans
GOALS	Assist the rural, unserved, and underserved communities of the Six County AOG to expand access to high-speed internet through infrastructure development.		Maximize the benefits and value of high- speed internet through education and digital skill building initiatives.		ts gh I es.	Assist in increasing affordable, reliable, high-speed home internet options for Six County Area governments, businesses, and residents.	



	governments with the tools and	digital divide and increase access to	governments, businesses, and	identifying and maximizing
KEY STRATEGIES	develop effective policy, relationships, and education to expand and enhance local broadband access	and affordable internet tools.	the option to access affordable high-speed internet	broadband funding opportunities



1 OVERVIEW OF THE LOCAL BROADBAND PLAN

1.1 VISION

Connecting Utah is working to assist communities throughout Utah to have affordable and reliable high-speed internet through broadband connectivity. Through a collaborative effort between local communities and the Utah Broadband Center (UBC), we aim to bridge the digital divide and ensure universal access to high-speed broadband infrastructure. To support statewide broadband planning efforts, the Six County Association of Governments (AOG) must better understand currently available broadband infrastructure, identify infrastructure needs, and implement actionable strategies to help the communities within Juab, Millard, Sevier, Piute, Wayne, and Sanpete Counties most impacted by the current digital and broadband infrastructure divide.

This vision includes broadband infrastructure that is accessible, modern, and scalable throughout all six counties, providing both urban and rural communities with data-driven insights and innovative solutions to optimize broadband deployment, address disparities, and ensure that the benefits of connectivity reach every corner of the Six County region.

In order to accomplish this vision, a collaborative effort among the Six County AOG, internet service providers (ISPs), and other private and public stakeholders to establish clear goals and objectives is imperative.

1.2 GOALS AND OBJECTIVES

As part of the Six County AOG Local Broadband Plan, some of the stipulated goals are:

- Infrastructure: Assist the rural, unserved, and underserved communities of the Six County AOG to expand access to high-speed internet through infrastructure development.
- Education: Maximize the benefits and value of high-speed internet through education and digital skill building initiatives.
- **Affordability:** Assist in increasing affordable, reliable, high-speed home internet options for Six County Area governments, businesses and residents.

To better identify the current broadband infrastructure and service needs and strategize the implementation of such goals, the Local Broadband Plan will also have the following objectives:



- Provide Six County Area local governments with the tools and resources to develop effective policy, relationships and education to expand and enhance local broadband access.
- Decrease the digital divide and increase access to devices, training, and affordable internet tools.
- Ensure that all governments, businesses and residents have the option to access affordable high-speed internet



2 BACKGROUND

On November 15, 2021, the Infrastructure Investment and Jobs Act (IIJA) was signed into law. This Act included a \$65 billion investment in high-speed broadband internet infrastructure and efforts to close the digital divide to ensure that all Americans have access to reliable, affordable, high-speed internet.

Included in the IIJA was the Broadband Equity, Access, and Deployment (BEAD) Program. The BEAD Program provides \$42.45 billion to expand high-speed Internet access by funding planning, infrastructure deployment and adoption programs throughout the United States.

Through this funding, the Utah Broadband Center (UBC) launched a grant program that will consist of two phases, with funding in each phase. The first phase is planning and the second is implementation. The State of Utah was awarded \$5 million to support both the creation of a statewide Digital Connectivity Plan and provide funding for local communities to create local broadband plans. Six County AOG's Local Broadband Plan will be used to inform the statewide Digital Connectivity Plan that will determine Utah's broadband priorities over the coming years.

The UBC awarded Six County AOG \$120,000 (\$20,000 per county) to create a plan for broadband infrastructure deployment in the region. Six County AOG's Local Broadband Plan will be used to inform the statewide Digital Connectivity Plan that will determine Utah's broadband priorities over the coming years.

The local planning grant from the UBC was awarded on April 3, 2023, and the project kick-off meeting with the consultant team, Horrocks, began on April 11, 2023. The initial draft of this plan was submitted on June 1 to the UBC, and the final plan to be incorporated in the statewide planning efforts will be submitted on August 1, 2023.

2.1 SCOPE OF BROADBAND PLAN

The Six County AOG region is located in the central part of Utah and comprises six counties: Juab, Millard, Sanpete, Sevier, Piute, and Wayne. The area covers over 11,000 square miles and has a population of approximately 55,000 residents. The economy is primarily based on agriculture, mining, and tourism, with some manufacturing and service industries.

Most rural areas in Six County AOG have some form of internet service available, but most areas have limited options. There is a sizable digital divide in the area. Affordably priced, dependable broadband service is a necessity for the growth of the economy, the improvement of public education, and the general quality of life for many citizens and enterprises.

Additionally, the Six County AOG region has unique community needs that require customized broadband solutions. This includes serving underserved populations, such as low-income households, the elderly, and community minorities; as well as addressing the specific needs of key sectors, such as agriculture, education, health, and emergency services. Understanding the



various needs of the communities within the region is critical to developing a comprehensive and effective Local Broadband Plan.

The Six County AOG is creating a local broadband infrastructure plan as a solution to this problem and as a road map for enhancing and expanding broadband connectivity in the region. Availability, affordability, accessibility, and dependability will be prioritized in this strategy, which will be developed in collaboration with local stakeholders, including citizens, businesses, and community organizations.

Figure 1 shows the boundaries in the Six County region.

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A summary of the demographics of the area is outlined in Table 1 below. These statistics reflect the most updated data from the U.S. Census 2020 for the State of Utah.¹

	JUAB COUNTY	MILLARD COUNTY	SEVIER COUNTY	PIUTE COUNTY	WAYNE COUNTY	SANPETE COUNTY
Total Population	11,786	12,975	21,522	1,438	2,486	28,437
Median Household Income	\$74,741	\$66,304	\$60,262	\$33,611	\$55,605	\$60,186
Total Employment Establishments	245	260	562	27	100	466
Bachelor's Degree or Higher	21.10%	23.50%	21.80%	20.30%	21.80%	23.00%
Employment Rate	64.80%	59.70%	57.20%	40.30%	56.90%	53.10%
Poverty	11.30%	12.60%	12.20%	19.90%	9.80%	13.20%
Median Age	30 years	34 years	36 years	50 years	43 years	34 Years
Land Area in Square Miles	3,391	6,605	1,910	758	2,461	1,590
RACE & ETHNICITY						
White	91.90%	82.90%	91.50%	94.00%	92.00%	85.70%
Hispanic/Latino	4.90%	12.70%	5.40%	4.50%	6.20%	9.60%
American Indian and Alaska Native	1.10%	1.20%	0.90%	0%	0.60%	0.60%
All Others	2.10%	3.20%	2.60%	1.50%	1.20%	4.10%

Table 1. Demographic Information

2.2 WHAT IS BROADBAND?

Broadband is a dedicated connection to high-speed internet. The threshold for what speed is defined as high-speed internet changes according to the standards presented by the Federal

¹ United States Census Bureau. 2021. Decennial Census (P1 Race). <u>https://data.census.gov/table?q=Population+Total&tid=DECENNIALPL2020.P1</u>



Communication Commission (FCC). Currently, broadband is defined as any speeds above 25 megabits per second (Mbps) download speed and 3 Mbps upload speed (25/3 Mbps).²

The BEAD Program defines households with less than 25/3 Mbps as unserved locations and those with less than 100/20 Mbps as underserved locations.³ Community anchor institutions with less than 1/1 gigabits per second (Gbps) speeds are also considered underserved, as defined by Section 60102 of the IIJA⁴, which also sets forth the BEAD program⁵.

2.2.1 Broadband Network Distribution

The infrastructure that data travels along is called a network. Similar to other public utilities such as roads or water pipes, the network infrastructure is carefully planned and then built according to how many people need to be served in both the present and the future. Within the network, data is carried across fiber, wires, or radio signals in the air (wireless). These various means of carrying data have different capacities and speeds. The part of the network used to transport data between cities or across cities is known as middle mile infrastructure. The middle mile network connects to hubs built throughout a city. The part of the network that connects from a hub to the end-user is called final mile or last mile infrastructure. End-users can be businesses, residential homes, or individuals connecting to cell service. In Figure 2 the blue lines connecting the city to the hubs represent middle mile infrastructure, and the orange lines connecting the hubs to the residential houses represent final mile (or last mile) infrastructure.

https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf

² FCC. (2015). Broadband Progress Report. <u>https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2015-broadband-progress-report</u>

³ NTIA. Notice of Funding Opportunity - Broadband Equity, Access, and Deployment (BEAD) Program. Section I. Program Definitions, C. Definitions. Pages 16-17.

⁴ Congress.gov. H.R.3684 - Infrastructure Investment and Jobs Act. <u>https://www.congress.gov/bill/117th-congress/house-bill/3684/text</u>

⁵ United States Congress. (2021). H.R. 3684- Infrastructure Investment and Jobs Act. 60401(e)(3)(C). https://www.congress.gov/bill/117th-congress/house-bill/3684/text



2.2.2 Types of Broadband There are various technologies that high-speed broadband internet can be served through, such

MIDDLE MILE

as fiber optic, digital subscriber line (DSL), cable modem (Coax), and wireless technologies. Each form of technology has pros and cons.

Figure 2. Middle Mile and Final Mile Infrastructure

FINAL MILE

2.2.2.1 Fiber Optic

Fiber optic technology sends data-carrying digital signals as light through cables made of glass fibers. It provides the fastest, most reliable networks. Because fiber is a newer technology, many areas do not have fiber networks developed, and this type of network can require building new infrastructure. Fiber optic cables can be placed on existing power poles or they can be placed inside conduit buried in the ground. If the network is designed and installed correctly, symmetrical speeds can be up to 400 Gbps; however, 400 Gbps speeds are typically only designed for and installed in the backbone/distribution cables of the network. **Fiber optic is the gold standard for high-speed broadband internet as it provides the fastest speeds and can support emerging digital technologies into the future**.

2.2.2.2 DSL

DSL uses existing copper telephone cables to transmit data. Speeds vary widely based on local providers, the condition of cables, the distance between homes, and the equipment at the primary connection point. Because of this, DSL speeds can be less than 1 Mbps or up to 100 Mbps. With maximum DSL speeds at 100 Mbps, DSL does not meet the ever-growing needs of future technologies, so it is not a preferred option when building modern broadband infrastructure.



2.2.2.3 Cable Modem (Coax)

Cable modem delivers increased speeds over DSL and transmits broadband data over the same coaxial cables that are used for cable televisions. Like DSL, it is not a preferred option when building new broadband infrastructure, but it can be used where existing infrastructure is in place. Cable modems use a protocol called Data Over Cable Service Interface Specification (DOCSIS). There are six versions of DOCSIS (1.0, 1.1, 2.0, 3.0, 3.1, and 4.0). The speeds range between 40 Mbps download and 10 Mbps for upload for version 1.0 to 10 Gbps download and 6 Gbps upload for version 4.0.

2.2.2.4 Wireless

Wireless broadband includes several technologies, including satellite broadband, Wireless Local Area Networks (WLANs), Wi-Fi, and cellular 4G, 5G, and LTE. These technologies use radio spectrum to transmit broadband data. Please note that BEAD funding can only be used to build wireless broadband technology when it is connected to a terrestrial Middle Mile network and cannot be used on satellite broadband technologies.

Satellite Broadband – Satellite internet involves satellites that orbit the earth while transmitting long-range signals to individual subscriber locations anywhere on earth with a clear view of the sky. It is primarily a middle mile wireless solution, but many people use satellite internet directly to their homes as well. Satellite connection speeds vary based on location, and weather and tree foliage can affect the signal. Typical connection speeds are 12-100 Mbps. However, satellite internet has a higher latency (a delay of transmission also known as lag), making video calls extremely "glitchy" on this type of internet. An acceptable range of latency is between 50-100 ms. Satellite connection latency typically falls within 594-624 ms.⁶ For the BEAD program, the NTIA currently does not recognize satellite broadband technologies as a reliable wireless technology.

WLANs – WLANs are the Last Mile networks used at homes or businesses to distribute internet to phones, computers, and other devices through radio signals. Wi-Fi and hotspots are both examples of a WLAN. Connection speeds are dependent on the service provided at the access point.

Cellular 4G, 5G, and LTE – Cellular 4G, 5G, and LTE involve antennas mounted on cell towers transmitting radio signals, which are then received through the modems in cell phones, mobile routers, cellular antennas, or various signal boosters. Mobile carriers now offer residential fixed wireless broadband plans supported by their mobile towers. A middle mile fiber network connected to a tower will increase the network capabilities and provide a better final connection to the cellular user. The download speeds can often reach 600 Mbps if specialized equipment is used to boost the signal. This is usually the fastest high-speed broadband internet available for

⁶ Cooke, K. (2023). Is Satellite Internet a Good Option? Pros and Cons of Satellite Internet Service. SatelliteInternet.com.

https://www.satelliteinternet.com/resources/satellite-internet-pros-and-cons



users who do not have access to fiber optic technology. This technology supports broadband speeds for mobile devices as well as fixed wireless broadband service to residences.

2.2.3 Benefits of Broadband

High-speed broadband internet has become an integral part of society. It is critical for work, education, telehealth, and the completion of everyday tasks.

High-speed broadband internet has transformed the way the world does business. There are few businesses that can operate today without the internet, and while some can get by with a low-speed connection, high-speed internet is becoming more and more necessary. A Pew Research Center survey⁷ conducted in April 2021 found that 90% of adults surveyed considered internet "essential or important for them personally during the [COVID-19] pandemic."⁸ High-speed broadband internet has allowed for remote work possibilities, which opens the possibility of highly skilled workers relocating to smaller communities and benefiting the economies of those communities. Readily available access to the internet has allowed businesses to widen their customer base to a global market. Six County AOG's focus is Education, and high-speed broadband internet helps by expanding access to educational resources, supporting remote and blended learning, facilitating collaboration, enabling professional development, enhancing multimedia learning experiences, and connecting students and educators to global knowledge and expertise. It plays a crucial role in equipping students with the skills and knowledge needed to thrive in the digital age and promotes equitable access to quality education.

While high-speed broadband internet is benefitting many regions across the globe, it is important to ensure that Six County AOG does not get left behind. There is a growing digital divide where those that do not have access to the internet do not learn the digital skills necessary for high-paying jobs, pushing them further into poverty. Conversely, increasing high-speed broadband internet access increases economic opportunities for low-income families.

Developing digital skills at a young age has become increasingly important, as high-speed broadband internet is an integral tool in modern education and preparation for the future workforce. Access to online classes, homework submissions, and research opportunities can be lost if a reliable high-speed broadband internet connection is not secured. Many districts are also utilizing online learning on snow days and other times when it is not possible for students to gather at the school. Online classes can be made available for specialized subjects like foreign language or technological courses that do not have a local teacher available. Children without access to a broadband internet connection may be left out in these scenarios.

Other online resources are also becoming more important for communities. For example, telehealth is a tool that allows users to connect to doctors and medical providers online. Some of the benefits of telehealth include decreased health care costs, access to specialists not available locally, travel time reductions, and reducing the risk of exposing others to viral

⁷ https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/

⁸ https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/



infections. A reliable and fast connection to broadband is necessary when completing a video call with a health professional.

A reliable, affordable connection to high-speed internet has become increasingly essential for daily tasks. It is utilized when paying bills, accessing banks and retirement accounts, and applying and interviewing for jobs. High-speed broadband internet is also vital when enjoying modern-day entertainment, such as video streaming, watching live sports, or playing live video games. It is used when communicating with family and friends, especially when making a video call. Even using a smartphone with 4G or 5G service involves broadband technology.



3 CURRENT STATE OF BROADBAND AND DIGITAL ACCESS

3.1 METHODS TO DETERMINE THE CURRENT STATE OF BROADBAND

The planning team took several steps to determine the current state of high-speed broadband internet in Six County AOG. This planning team included the following individuals and/or organizations:

- Six County AOG
 - Tyler Timmons Regional Planner
 - Brock Jackson Regional Planner
- Horrocks
 - Eleise Lowe Project Manager
 - Jason Libert Technical Analysis
 - Aaron Clements Technical Analysis
 - Shane Eller Technical Analysis
 - Caleb Worthen Public Involvement
 - Chiara Serre Public Involvement

The activities performed included:

• **Public Outreach:** Six County AOG conducted targeted public outreach to gather feedback from residents from April 2022 through June 2022. The purpose of this outreach was to learn and understand regional broadband needs and to identify gaps in broadband availability, accessibility, and affordability for residents. Public outreach was conducted for both the Utah Internet Speed Test and the Six County AOG Broadband Survey in the following ways:

Sharable Outreach Package

A shareable outreach package was created for distribution to community partners that included:

- o Six County AOG Broadband Plan Overview Flyer
- o Social Media Posts and Graphics for Facebook, Instagram, and Twitter
- Website and Newsletter Content
- o Additional Connecting Utah Collateral
 - Utah Speed Test Poster, Bookmark, and Flyer (in English and Spanish)
 - Affordable Connectivity Program Flyer (in English and Spanish)



The outreach package was distributed to elected leaders from the 49 communities in the Six County AOG area.

Facebook Ad

A paid Facebook ad was also placed on May 15, 2023, and ran through May 31, 2023, specifically geo-targeted to reach residents in Juab, Millard, Piute, Sanpete, Sevier, and Wayne Counties. The ad reached 11,830 impressions within the designated Six County AOG audience and received an average 3.1% clickthrough rate.

Google Ad

A strategic Google Ads campaign was launched and ran from May 10, 2023, to May 31, 2023. This Google Ad campaign included a mix of strategies to reach stakeholders and encourage participation in the planning process. The ads reached 56,404 impressions within the designated Six County AOG audience and achieved an average 3.6% click through rate.

Website

A location-specific landing page was created and linked to all collateral created to capture public feedback and encourage involvement in the development of the local broadband plan. The landing page received 1,352 visits from April 25 to June 30, 2023.

A hotline number was included on the website and all outreach materials. Individuals without internet access, or who were more comfortable sharing input over the phone, were encouraged to call so their input could be included.

Tabling Event

A tabling event was held at the Six County AOG Regional Growth Summit. This wellattended event was focused on issues facing Six County AOG member communities and how to solve them. At the tabling event, members were encouraged to participate in the Six County AOG Broadband Survey and the Utah Internet Speed Test. Key takeaways from interactions made at the tabling event were the need to not only meet the demands of growth in their communities, but also to ensure access and affordability to existing residents and businesses.

• **Public Surveys:** The outreach team created the Six County AOG Broadband Survey to gather more quantitative data from the general public about their experience with internet connectivity. Questions in this survey covered topics such as residents' current internet connections, device accessibility, affordability options, connectivity for businesses, community internet needs, and voluntary disclosure of demographics. Six County utilized questions reviewed and approved for exemption from the Institutional Review Board and provided by UBC. A toll-free hotline number was provided for residents taking the survey who did not have access to the internet.

As of June 30, 2023, there were 142 surveys completed as part of the Six County AOG's broadband planning outreach. Additional surveys contributed to the overall data for the



Six County area. These include the statewide UBC surveys for residents (40), local government representatives (six), community leaders (one), and state elected officials (two). In total, 191 public surveys are represented in this plan.

• **Community Partner Survey and Workshop:** The planning team facilitated a community partner workshop on Thursday, May 25, 2023. The purpose of this workshop was to bring Six County AOG and the organizations that support community broadband expansion together in an effort to help document existing broadband assets and plan for a future where every resident in the Six County area has the tools necessary to successfully access and utilize affordable high-speed internet.

Following the workshop, a community partner survey was provided to participants and identified partners. The purpose of the survey was to take stock of partnering entities' current broadband planning, access, deployment, and digital access activities. The survey also captured data on challenges to local broadband expansion. The Six County AOG Community Partner Survey was completed by seven entities. Specific findings from the Community Partner Survey are detailed in Section 3.4 Asset Inventory.

• Internet Speed Tests: Stakeholders' participation in the Utah Internet Speed Test, sponsored by the UBC, helped the team gather real-time internet upload and download speeds in the Six County AOG region. The outreach team advertised the Utah Internet Speed Test with the use of the outreach package and paid digital advertising to notify the general public of Six County AOG's planning effort.

As of July 5, 2023, there were 937 speed tests completed in Juab, Millard, Piute, Sanpete, Sevier, and Wayne counties. See Section 3.5.1 for more detailed Internet Speed Test results and information.

• Stakeholder Meetings and Workshops: The UBC, as part of the statewide planning effort, conducted stakeholder workshops in each of the 29 counties in Utah. Participants of these workshops included community advocates, educators, public and elected officials, and industry leaders. During these meetings, participants engaged in in-depth discussion relating to broadband. Topics included education, economic impact, affordability, availability, barriers, and opportunities to expand access to high-speed internet.

The workshop for Six County AOG was held virtually on Thursday, January 19, 2023. The workshop was attended by individuals representing school districts, towns and counties in the region. Key workshop findings include:

• Several workshop attendees impressed the challenges smaller communities in the area are having getting connectivity. The larger towns in the area are built out but small towns like Learnington and Lynndyl have poor connectivity and limited provider options.



- Many towns and cities in the area have multiple canal and railroad crossings. Obtaining permits from the administrative bodies of these agencies to install infrastructure can take years.
- There are concerns related to cybersecurity. Rates of cybercrime are increasing and many in the area are falling victim.
- Meeting With Internet Service Providers (ISPs): Meetings were scheduled and conducted with identified ISPs and Six County AOG officials to create a partnership and discuss ISP expansion plans in Six County AOG and assess their readiness to participate in the Local Broadband Plan. Focus areas included service requirements and ISPs' capacity to deliver reliable broadband connectivity. The approach involved comprehensive measures such as analyzing data from the FCC and the Utah Broadband Maps as well as conducting surveys and meetings with local officials. ISPs' active involvement in the Affordability Connectivity Program (ACP) was ensured, verifying their commitment to connecting subscribers to broadband access across the region. The unique geography and characteristics of the Six County AOG were considered when evaluating infrastructure needs and associated costs to establish realistic project timelines and budgets. In addition to providing valuable insights into ISP capabilities and commitment to expanding broadband access, meeting with the respective ISPs provided crucial information for formulating effective plans to deliver internet connectivity to unserved and underserved communities.
- Existing Assets Assessment: Using data collected from state GIS mapping efforts, the FCC, the Utah Residential Broadband Map⁹, surveys, meetings with stakeholders, and internet speed tests, the technical team created an asset inventory of all existing broadband assets within the Six County AOG area. The integration of GIS data into the assessment provided valuable insights into the existing broadband landscape, aiding in the development of targeted strategies for enhancing connectivity.
- **Disparity Analysis:** Analysis was conducted to identify and map areas within the Six County AOG that are unserved and underserved. To further understand potential disparities in broadband access, socioeconomic and demographic variables were considered that could contribute to inequalities in broadband access between members of one group versus another. Examples of groups considered include Age 60+, Disabled Individuals, Veterans, Incarcerated Individuals, Non-White, and Rural Areas. This data was gathered from both public outreach efforts and the U.S. Census and analyzed. GIS mapping technology allows visualization of those areas that may require targeted intervention for digital inclusion efforts.
- **Research:** The team collected research from various sources and agencies regarding broadband infrastructure and deployment best practices, federal funding opportunity

⁹ UGRC. Utah Residential Broadband Map. <u>https://broadband.ugrc.utah.gov/</u>



qualifications, all resources produced by the NTIA, and broadband outreach best practices.

Additional research was conducted by utilizing the latest U.S. Census data to provide insights into an area's population and household data, geographic distribution, demographic information, socioeconomic information, internet adoption and usage, and commuting patterns. These factors contribute to the formation of a comprehensive plan that is based upon data.

• **Geographic Information System (GIS) Mapping:** To visualize and analyze broadband coverage, gaps, and infrastructure locations in Six County AOG, GIS mapping technology was utilized. This mapping approach provided valuable insights into the current state of broadband connectivity, identifying areas of need, and assisting in the planning of future expansion.

3.2 EXISTING RESOURCES

Existing programs include all the programs and activities that the Six County AOG currently performs or has performed in the past. Six County AOG collaborated with the project team to produce this Local Broadband Plan will work together to inform Utah's Digital Connectivity Plan. Once federal funds are awarded, the state will allocate those funds based on areas with the most need.

Funding for the Six County AOG Local Broadband Plan was provided by the UBC, powered by the Governor's Office of Economic Opportunity, through the Local Broadband Planning Grant. <u>A</u> total of \$942,738 grant funds were awarded to 28 organizations¹⁰ across the state to build comprehensive plans relating to local broadband and digital access needs. Six County AOG was awarded \$120,000 for broadband infrastructure planning. The Six County AOG Local Broadband Plan will be used to inform the statewide Digital Connectivity Plan that will determine Utah's broadband priorities over the coming years.

Table 2 and Table 3 include details about broadband-related resources and funding. Figure 3 shows areas which have recently received funding for broadband-related grants. Additional historic funding can be found on the Connect America webpage¹¹.

¹⁰ <u>https://business.utah.gov/broadband/utah-broadband-center-ounces-2023-planning-grant-recipients</u>

¹¹ <u>https://data.usac.org/publicreports/caf-map</u>



Table 2. Current Broadband-Related Resources

ACTIVITY NAME	DESCRIPTION	INTENDED OUTCOME(S)		
Local Broadband Plan	This project is to inform the statewide Digital Connectivity Plan that will determine Utah's broadband priorities over the coming years.	Aid the Six County AOG to identify needs and gaps in local broadband infrastructure, then strategize and plan for implementation.		
Southwest Utah Broadband Project.	This project is a collaboration between local governments, private companies, and community groups to improve broadband access and affordability in the region.	Build new fiber-optic networks, expand existing networks, and improve broadband speeds and reliability		
Utah Education Network	This is a state-funded program that provides high-speed broadband connectivity to schools and educational institutions across the state, including the Six County AOG region.	Provide access to educational resources, online learning tools, and distance education programs.		
CIB Regional Planning Program	The core mission of the Utah Permanent Community Impact Fund Board (CIB) is to mitigate socioeconomic impacts resulting from natural resource development on federal lands.	 Provide technical assistance to communities to meet their planning goals. Create capital improvements list for each county. Help communities in preparing grant applications for planning and capital improvements needs to the CIB. 		
Six County AOG	Foster an inclusive and digitally empowered community within Six County AOG by expanding broadband infrastructure, fostering partnerships, promoting affordability, and educating residents.	Bridge the digital divide and ensure that every resident in the region has affordable access to high-speed broadband internet.		



Table 3. Broadband Funding

SOURCE	PURPOSE	LOCATION	TOTAL
Utah Broadband Center	Broadband infrastructure plan development	Juab, Millard, Sanpete, Piute, Sevier, and Wayne Counties	\$120,000
Broadband Access Grant	Centracom interactive was awarded money to improve the connectivity for unserved internet users in portions of Millard County	Leamington, Meadow, Kanosh	\$839,708
Connect America Fund Phase II Auction	Viasat Inc. deploys broadband in areas that are costly to serve	Piute County Millard County	\$311,968.68
Connect America Fund Broadband Loop Support	Southern Central Utah Telephone Association, Inc. builds broadband to a specific number of fixed locations in areas eligible for funding.	Piute County Sevier County Wayne County	\$20,238,402.00
Alternative Connect America Cost Model	Lict Corporation	Sanpete County	\$35,853,967.68





Figure 3: Funding Areas in the Six County AOG



3.3 PARTNERSHIPS

This section identifies existing and potential partners and community anchor institutions that Six County AOG may engage for the development and implementation of the Local Broadband Plan. Such partners include organizations that are already engaged in issues related to broadband deployment and digital inclusion, such as local governments, college and university systems, school systems, faith-based organizations, foundations, chambers of commerce, and local ISPs (see Table 4 and Table 5).

COMMUNITY PARTNER/ ANCHOR INSTITUTION	DESCRIPTION OF CURRENT OR PLANNED ROLE IN BROADBAND DEPLOYMENT AND ADOPTION
Internet Service Providers	The following providers offer wired or fixed wireless, in the Six County area: NeboNet, CentraCom, Beehive Broadband, Manti Telephone, Frontier Communications, InfoWest, South Central, I Web Conn, CenturyLink, Lightburst
School Districts	School District have Wi-Fi in the buildings and parking lots of schools for student and employee access. These school districts in Six County are: Juab, North Sanpete, South Sanpete, Millard County, Sevier County, Piute County and Wayne County.
Delta City Library	The Delta City Library provides internet and a computer lab for the Six County AOG region.
Piute County	Piute County has received a grant to build a remote work innovation center. Funding was provided through the Governor's Office of Economic Opportunity. Construction is anticipated to begin in 2024.
Richfield City	The Richfield City Library as well as City Park and Lions Park have internet connectivity.

Table 4. Local Community Partners and Community Anchor Institutions



Table 5. Statewide Partners

NAME	CONTACT INFORMATION	ROLE IN BROADBAND DEPLOYMENT AND ADOPTION
Rebecca Dilg	rdilg@utah.gov (801) 538-8681	Utah Broadband Center Director Governor's Office of Economic Opportunity
Claire Warnick	cwarnick@utah.gov (801) 450-6682	Utah Broadband Center Program Manager Governor's Office of Economic Opportunity
Teri Mumm	tmumm@utah.gov	Utah Broadband Center Digital Access Program Manager <i>Governor's Office of Economic</i> <i>Opportunity</i>
Lynne Yocom	yocom@utah.gov (801) 514-4565	Fiber Optics Manager Utah Department of Transportation
Vikram Ravi	vravi@ntia.gov	Federal Program Officer for Utah National Telecommunications and Information Administration

3.4 ASSET INVENTORY

Broadband assets include hard assets (e.g., towers, buildings, and utility poles) and soft assets (e.g., programs, activities, strategies, skills, people) that can be leveraged to close the digital divide. Hard assets in Six county AOG are described in Section 3.4.1. Six county AOG's soft assets are described in sections 3.4.2 and 3.4.3, below.

3.4.1 Broadband Availability

Broadband availability relates to whether the physical broadband infrastructure is available in a region to support specific speeds. To deliver broadband speeds of at least 100/20 Mbps broadband speeds to the end-user, a robust network must be in place.

General Service Areas

Figure 4 - Figure 15 below depict the wireline and fixed wireless broadband currently available in Six County AOG. ISPs are required to submit their corresponding service areas twice a year through FCC Form 477. ISPs are now required to submit service areas through the FCC webpage¹². The accuracy of the service locations can be influenced by the optimism and interests of ISPs. These maps, part of the Utah Residential Broadband Map,¹³ provide specific upload and download speed information as well as fixed and mobile wireless data. Figure 5, Figure 7, Figure 9, Figure 11, Figure 13 and Figure 15 show service areas considered "served"

¹² Federal Communications Commission. December 2022. Information for Filers. https://www.fcc.gov/BroadbandData/filers

¹³ UGRC. Utah Residential Broadband Map. <u>https://broadband.ugrc.utah.gov/</u>



which have at least 100/20 Mbps speeds. Figure 4, Figure 6, Figure 8, Figure 10, Figure 12, and Figure 14 show service areas with speeds of at least 25/3 Mbps.



Figure 4. Broadband Coverage Area in Juab County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)



Figure 5. Broadband Coverage Area in Juab County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 6. Broadband Coverage Area in Millard County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 7. Broadband Coverage Area in Millard County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 8. Broadband Coverage Area in Sanpete County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 9. Broadband Coverage Area in Sanpete County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 10. Broadband Coverage Area in Sevier County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 11. Broadband Coverage Area in Sevier County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 12. Broadband Coverage Area in Piute County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 13. Broadband Coverage Area in Piute County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)



Figure 14. Broadband Coverage Area in Wayne County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)



Figure 15. Broadband Coverage Area in Wayne County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)

Table 6 summarizes the availability of different internet technologies for the population of Six County AOG, including fiber, cable/DSL, licensed wireless, and unlicensed wireless for all available speeds. These numbers were obtained from GIS data as reported from FCC Form 477.¹⁴ Understanding the availability and use of these technologies is critical for the development of a comprehensive broadband plan that meets the needs of Six County AOG.

COUNTY NAME	FIBER	CABLE/DSL	LICENSED WIRELESS	UNLICENSED WIRELESS
Millard County	1.7%	96.9%	49.6%	0%
Juab County	51.6%	90.0%	88.8%	87.3%
Sevier County	6.4%	88.5%	38.4%	72.9%
Piute County	27.8%	57.9%	0%	48.2%
Wayne County	75.4%	17.4%	0%	79.8%
Sanpete County	58.9%	91.7%	35.7%	80.2%

Table 6. Technology Available to Region's Population

¹⁴ Federal Communications Commission. Fixed Broadband Deployment Data from FCC Form 477. <u>https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477</u>



Internet Service Providers (ISPs)

Private ISP companies provide internet service to residents and businesses and typically own the networks that distribute the broadband to their customers. Twice a year, ISPs report their service areas through FCC Form 477. In Utah, these coverage areas are mapped onto Utah Residential Broadband Map¹⁵, a state GIS map from the Governor's Office of Economic Opportunity. In Six County AOG, a range of ISPs cater to the diverse needs of residents and businesses.

Wired and fixed wireless ISPs currently serving Six County AOG are:

- Beehive Broadband
- CentraCom
- Lumen (formerly CenturyLink)
- Comcast
- Emery Telecom
- Frontier
- InfoWest
- I WEB CONN
- South Central Communications

Figure 16 - Figure 24 show the current coverage areas of each of the available ISPs in Six County AOG. Areas in red are wired service while areas in green are fixed wireless service. These coverage areas show any coverage available by the ISP, regardless of whether it is a high or low speed.

¹⁵ UGRC. Utah Residential Broadband Map. <u>https://broadband.ugrc.utah.gov/</u>




Figure 16. Beehive Broadband Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 17. CentraCom Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 18. CenturyLink Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 19. Comcast Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 20. Emery Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 21. Frontier Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 22. I WEBB CON Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 23. South Central Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)





Figure 24. InfoWest Coverage Area in Six County AOG with Any Speed (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)



Wireless Towers

Point-to-point wireless towers, also known as microwave towers or wireless backhaul towers, are structures used in telecommunications to establish wireless communication links between two specific points. These towers facilitate the transmission of data, voice, or other forms of communication over long distances without the need for physical cables or fiber optic lines.

The primary purpose of point-to-point wireless towers is to establish a direct and dedicated connection between two locations. These towers are typically equipped with directional antennas, which transmit and receive signals in a focused beam, allowing for high-speed and reliable data transmission. Figure 25 shows wireless tower locations within the Six County AOG region.

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Figure 25: Wireless Cell Towers in the Six County AOG



Utah Department of Transportation (UDOT)

UDOT has been actively deploying fiber optic infrastructure along the state highway system for many years. This infrastructure includes conduit, fiber optic cabling, access points, distribution hubs, and communications equipment. This infrastructure is a publicly owned asset that UDOT uses to monitor traffic and other transportation-related activities and facilitate broadband deployment across state highways. Whenever UDOT builds or expands a roadway, their practice is to install fiber optic conduits as an incremental cost to the project. UDOT exchanges sections of their empty conduit to private ISPs to allow them to install their own cabling. In exchange, private ISPs provide their own empty conduit for UDOT to use in different locations. Often, an ISP that provides shared communications infrastructure, such as Crown Castle or Syringa, will own and manage the fiber in the conduit leased from UDOT. This network creates the primary middle mile fiber network throughout the region. The ISPs that provide final mile internet service to the end user can often start their build out from the nearest state road.

One of the advantages of using the UDOT fiber network for broadband is that it can reduce the cost and complexity of deploying new infrastructure. Rather than building new fiber optic cables, ISPs can lease or use existing UDOT fiber to provide broadband services to customers. This can make it more feasible for ISPs to offer high-speed internet service in rural areas where the population density may be lower and the cost of deploying new infrastructure is higher. Figure 26 shows UDOT fiber network infrastructure in the region of Six County AOG along with FCC unserved and underserved locations. The significance of these unserved locations will be discussed in Section 3.5.1.



Figure 26: UDOT Fiber Network in the Six County AOG



3.4.2 Digital Access

Digital access refers to the ability of individuals to use and benefit from digital technologies, including high-speed internet. In addition to the availability of broadband infrastructure, digital access also depends on factors such as knowledge, skills, and personal hardware. As digital technologies continue to play an increasingly important role in our daily lives, the need for equitable access to high-speed internet becomes more pressing. Digital equity is an important aspect of this issue, as it refers to the fair and just distribution of digital resources and opportunities, particularly for covered populations (unserved, underserved, and underrepresented communities). In the Six County AOG region, ensuring digital access and digital equity for all residents is a critical part of building a thriving and inclusive community.

Community Programs

Refer to Section 3.3 Partnerships, Table 4 and Table 5 for information on local community partners and community anchor institutions and programs.

Public Wi-Fi Networks

Utah Communities Connect (UCC) and UBC has developed an interactive map detailing public Wi-Fi locations in Utah as a response to the access needs brought on by the COVID-19 pandemic. This map documents Wi-Fi access points throughout Utah. In Six County AOG, there are five libraries, six UDOT locations, and one park that offer public Wi-Fi access (see Figure 27).¹⁶

These access points are throughout the state at locations such as rest areas, visitor centers, ports of entry, UDOT maintenance stations, national parks, recreation facilities, and other state and municipal buildings in rural areas. As these Wi-Fi networks are typically fed through fiber optics, the speeds are very high (at least 100/20 Mbps) and the networks provide significant bandwidth and can serve multiple users. The UBC will work to update and reflect all identified hotspots on the Public Wi-Fi Access map.

¹⁶ Utah Communities Connect. Public Wi-Fi Access Points. <u>https://utah.maps.arcgis.com/apps/webappviewer/index.html?id=e463ba10af034b6e90a8d01b5c13ec55</u> (accessed May 9, 2023)



Figure 27. Six County AOG Communities Connect Wi-Fi Locations

Additionally, most State-owned buildings have a free, open public Wi-Fi network. This network is provided by Utah DTS and is an encrypted network that can be accessed by the general public. These buildings include any state administrative or department offices where State of Utah employees are working.

Wi-Fi Hotspot Loan Programs

The State Library Division has a program that provides free wireless hotspot devices to the public. Residents can check out a hotspot device to be able to connect online remotely at zero cost. These devices are available at most state- or municipality-owned libraries across the state.

Library Wi-Fi

The Utah State Library Division oversees and works with all public libraries within the state to ensure Wi-Fi is available to the public. All State, County, and City libraries offer public Wi-Fi connectivity. The speed of each Wi-Fi network depends on the location, but most libraries are connected with fiber optics, meaning the Wi-Fi supports robust connection speeds. Libraries in the Six County area are the Delta City Library, President Millard Fillmore Library, Salina Public Library, Elsinore Town Library, Monroe Public Library, Richfield Public Library, Gunnison Civic Library, Manti City Public Library, Ephraim Public Library, Cleone Peterson Eccles Library (Fairview), Mt. Pleasant Public Library, and Nephi Public Library. Additionally, the Tri County and Sanpete County Bookmobiles serve anyone residing in Sevier, Piute, Sanpete, or Wayne Counties.

Mobile Wireless Access

Mobile wireless carriers provide strong coverage areas across Six County AOG. According to the data provided by the major mobile wireless carriers, there are only a few pockets where mobile wireless service is not available. The areas that are not covered include locations that are extremely remote, or where the terrain is such that the wireless signal is impeded. For those



locations that are covered by mobile wireless, the majority of the service that is offered supports the "served" threshold of 100/20 Mbps broadband speeds. See Figure 28 for a mobile wireless coverage map of at least 100/20 Mbps speeds (data provided to the Utah Geospatial Resource Center).



Figure 28. Mobile Wireless Coverage Area in Six County AOG (100/20 Mbps Minimum Speeds)

3.4.3 Broadband Affordability

Broadband affordability is a critical component of digital equity, as the cost of high-speed internet can be a significant barrier for many households. In Six County AOG, the economic affordability of broadband varies depending on a variety of factors, including the availability of affordable broadband service plans and discounted or subsidized broadband programs. While some ISPs offer competitive pricing and bundles that can make high-speed internet more accessible, others may charge higher prices for their services. Understanding the overall affordability of broadband in Six County AOG is essential for ensuring that all residents have access to the digital resources and opportunities they need to thrive.

Table 7 outlines the providers available in the area, as well as their respective costs, available speeds, and participation in the ACP. Participation in the ACP program is a requirement for ISPs to be awarded federal BEAD implementation funding.



Table 7. Providers and Prices

PROVIDER	PRICE	DESCRIPTION OF SERVICE TIER, ADVERTISED SPEEDS, AND AFFORDABILITY	PARTICIPATES IN THE AFFORDABLE CONNECTIVITY PROGRAM?
Beehive Broadband	\$34.95 - \$132.95	6Mbps/1Mbps – 1Gbps/1Gbps Based on Location	Yes
CentraCom	\$35.95 \$55.95 \$69.95 \$119.95 \$129.95 \$139.95	50Mbps/5Mbps 75Mbps/10Mbps 100Mbps/20Mbps 250Mbps/25Mbps 500Mbps/50Mbps 1Gbps/100Mbps	Yes
Century Link	\$25 - \$175	10Mbps – 1Gbps Based on Location	Yes
Comcast	\$34 - \$289	10Mbps – 1Gbps Based on Location	Yes
Dish (Reseller)	\$25 - \$175	10Mbps – 1Gbps Based on Location	Yes
Emery	\$49.95 \$59.95 \$59.95 \$69.95 \$79.95	25Mbps/5Mbps – 1Tb(Usage) 100Mbps/20Mbps – Unlimited(Usage) 100Mbps/100Mbps – 250Gb(Usage) 1Gbps/1Gbps – 1Tb(Usage) 1Gbps/1Gbps Unlimited(Usage)	Yes
Frontier	\$62	25Mbps	Yes
Hughes Net (Satellite)	\$70 - \$120	10Mbps 25Mbps(Usage from 15Gb – 200Gb)	No
Infowest	\$49.95 - \$100 \$55 \$70 \$100 \$55 \$70	Wireless 25Mbps – 100Mbps Fiber 250Mbps Fiber 1Gbps Fiber 2Gbps Fiberwave 250Mbps Fiberwave 1Gbps	Yes
South Central	\$57 - \$75	5Mbps 50Mbps 1Gbps	Yes

There are various federal and state programs that aim to make broadband more affordable for low-income households, including the ACP, FCC's Lifeline program, the E-Rate program, and the Utah Universal Service Fund.



Affordable Connectivity Program (ACP)

The most impactful affordability asset currently available to residents of Six County AOG is the ACP. This federal benefit provides a service discount of up to \$30 per month on a home internet plan, and households on Tribal lands are eligible for up to \$75 per month to mitigate the higher cost of service in rural and remote areas. Unfortunately, the ACP is underutilized in Utah. Other assets include efforts to increase the awareness and use of ACP, such as grant-funded projects and the state-led Act Now campaign.

The FCC allocated \$66 million in grant funding for the ACP Outreach Grant Program. This program facilitates the promotion and awareness in the ACP¹⁷. Partners awarded funding under this program in the Six County area are the Utah Community Action Partnership Association and Utah State University. Additionally, Utah State University was awarded additional funding under this program for the Tribal Competitive Outreach Program.

Lifeline

Lifeline is an FCC program that helps make communications services more affordable for lowincome consumers. Lifeline provides a discount on qualifying monthly telephone service, broadband internet service, or bundled voice-broadband packages. The Lifeline program offers \$9.25 per month to certain qualifying households and plans, and the state of Utah provides an additional \$3.25 per month. As of January 2023, The Universal Service Administrative Co. provides the following participation metrics for Six County AOG (see Table 8).¹⁸

LIFELINE SUBSCRIBERS	NUMBER
Juab County (January 2023)	63
Millard County (January 2023)	82
Piute County (January 2023)	7
Sanpete County (January 2023)	185
Sevier County (January 2023)	190
Wayne County (January 2023)	15

Table 8. Lifeline Subscriber Data

E-Rate

The Schools and Libraries Universal Service Support Program, commonly known as the E-rate program, helps schools and libraries to obtain affordable broadband. The E-rate program is administered by the Universal Service Administrative Company (USAC) under the direction of the FCC. USAC is responsible for processing applications for support, confirming eligibility, and reimbursing service providers and eligible schools and libraries for the discounted services. USAC also ensures that the applicants and service providers comply with the E-rate rules and

 ¹⁷ FCC. Public Notice – Consumer and Governmental Affairs Bureau Announces ACP Outreach Grant Program Target Funding. March 10, 2023. <u>https://docs.fcc.gov/public/attachments/DA-23-194A1.pdf</u>.
 ¹⁸ Universal Service Administrative Co. Jan. 2023. Lifeline Program Data. <u>https://www.usac.org/lifeline/resources/program-data/#</u>



procedures established by the FCC. Four service categories are eligible for E-rate funding: telecommunications, internet access, internal connections, and basic maintenance of internal connections.¹⁹

The Utah Education and Telehealth Network (UETN) is the E-rate consortium lead in applying for and implementing E-rate funds received in Utah. UETN helps schools and libraries apply for discounts on broadband services through the E-rate program. This program utilizes Utah Universal Service Funds (UUSF), which are collected through fees on consumers' phone bills.

Utah Universal Service Fund

The Utah Universal Service Fund (UUSF) enables rural customers to have access to the same quality of service as urban customers at a reasonably comparable price. Enacted in 1997 and governed by Utah Administrative Rule R746-8, funding from UUSF is used to support programs that advance and maintain telecommunication networks and services in rural areas.²⁰ This program provides rural telecommunication providers a rate-of-return to advance the operation and maintenance of rural networks.

3.5 NEEDS AND GAPS ASSESSMENT

To ensure that all residents of Six County AOG have access to high-quality broadband internet, a needs and gaps assessment is essential. This assessment will identify gaps between the current state of broadband deployment and the needs of residents, businesses, and institutions. Through needs identification, data collection, and analysis, policymakers and community leaders can develop and implement strategies that address these gaps, ensuring that all residents have access to the digital resources necessary for success in today's economy.

To gather more qualitative data from the public about their experience with internet connectivity, a survey was created and distributed to the public in the Six County region. Questions in the Six County Broadband survey covered topics such as residents' current internet connections, device accessibility, affordability options, connectivity for businesses, community internet needs, and voluntary disclosure of demographics. A toll-free hotline number was provided for residents taking the survey who did not have access to the internet. As of May 14, 2023, there were 25 surveys completed for Six County AOG's broadband planning efforts. There were 45 surveys completed specifically in Juab, Millard, Piute, Sanpete, Sevier, and Wayne Counties in conjunction with the statewide UBC Digital Connectivity Plan. Survey results and charts relating to the Six County AOG's current broadband needs and gaps are included in the following sections.

¹⁹ Universal Service Administrative Co. Eligible Services List. <u>https://www.usac.org/e-rate/applicant-process/before-you-begin/eligible-services-list</u>

²⁰ Utah Office of Administrative Rules. (January 2022). Rule 8: Utah Universal Public Telecommunications Service Support Fund. <u>https://adminrules.utah.gov/public/rule/R746-8/Current%20Rules?</u>



3.5.1 Broadband Availability

The ability to interact with friends and family, access educational and health care resources, and fully engage in the digital economy are all made possible by having access to high-speed broadband. However, not every part of Six County AOG has access to dependable and reasonably priced broadband connectivity.

The primary metric by which broadband availability is evaluated is what speeds are available to residents and businesses throughout Six County AOG. The BEAD program aims to provide service of 100/20 Mbps speeds to every American. Serviceable locations with speeds under 25/3 Mbps are considered unserved locations that are given the top priority for broadband funding. Locations with speeds above 25/3 Mbps but below 100/20 Mbps are considered under 25/3 Mbps but below 100/20 Mbps are considered under 25/3 Mbps but below 100/20 Mbps are considered under 25/3 Mbps but below 100/20 Mbps are considered under 25/3 Mbps but below 100/20 Mbps are considered under 25/3 Mbps but below 100/20 Mbps are considered underserved locations and are the second priority for BEAD funding.

Figure 29 below shows the unserved areas where there is no wired or fixed wireless service above 25/3 Mbps.





Figure 29: Areas with No Services at 25 Mbps in the Six County AOG

0	5	10	20	30	40
					Miloc



Figure 30: Areas with Speeds Below 25 Mbps in Six County AOG

Miles



FCC Service Locations

The FCC has created a map that shows the service availability at each broadband serviceable location.²¹ Residences and businesses that are classified as unserved or underserved will qualify for BEAD funding. The data within the other sections of 3.5.1 generally support the FCC service designations.

Figure 31 through Figure 37 show all FCC serviceable locations while Figure 38 through Figure 44 shows only the unserved and underserved locations. Table 9 through Table 15 are the number of FCC locations that fall within each speed tier in Six County AOG.

²¹ FCC. National Broadband Map. <u>https://broadbandmap.fcc.gov/home</u>

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Figure 31: FCC Service Locations in the Six County AOG

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Figure 32: FCC Service Locations in Juab County

10



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Figure 33: FCC Service Locations in Millard County

Ω

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Figure 34: FCC Service Locations in Piute County



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Figure 35: FCC Service Locations in Sanpete County



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Figure 36: FCC Service Locations in Sevier County

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Figure 37: FCC Service Locations in Wayne County

19 Miles

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Figure 38: FCC Underserved/Unserved Service Locations in the Six County AOG

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Figure 39: FCC Underserved/Unserved Service Locations in Juab County

10



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Figure 40: FCC Underserved/Unserved Service Locations in Millard County

10

0

20 Miles

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Figure 41: FCC Underserved/Unserved Service Locations in Piute County



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Horrocks.



Figure 42: FCC Underserved/Unserved Service Locations in Sanpete County



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Figure 43: FCC Underserved/Unserved Service Locations in Sevier County
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Figure 44: FCC Underserved/Unserved Service Locations in Wayne County

19 Miles



Table 9. Broadband Speeds Available in Juab County

	UNSERVED (I 25/3 MBF	BELOW PS)	UNDERSEF (BELOW 10 MBPS)	UNDERSERVED SERV (BELOW 100/20 (ABOVE 1 MBPS) MBPS		:D 00/20)	TOTAL FCC
CITY	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	LOCATIONS
			Count	y			
Juab	653	14.9%	443	10.1%	3,284	75%	4,380
			Major C	ity			
Eureka	11	2.6%	1	0.2%	417	97.2%	429
Levan	51	14%	236	64.7%	78	21.4%	365
Mona	20	3.7%	103	19%	418	77.3%	541
Nephi	77	3.5%	4	0.2%	2,113	96.3%	2,194
Rocky Ridge	5	7.7%	5	7.7%	55	84.6%	65



Table 10. Broadband Speeds Available in Millard County

	UNSERVED (I 25/3 MBF	BELOW PS)	UNDERSEF (BELOW 10 MBPS)	INDERSERVED SERVED BELOW 100/20 (ABOVE 100/20 MBPS) MBPS)		D 00/20)	TOTAL FCC	
CITY	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	LOCATIONS	
			County	/				
Millard	1,376	22.9%	266	4.4%	4,357	72.6%	5,999	
			Major C	ity				
Delta	0	0%	0	0%	1,353	100%	1,353	
Filmore	70	6.5%	4	0.4%	1,009	93.2%	1,083	
Hinckley	21	7%	0	0%	277	93%	298	
Holden	1	0.5%	0	0%	207	99.5%	208	
Kanosh	152	62.6%	91	37.4%	0	0%	243	
Leamington	64	64%	36	36%	0	0%	100	
Lynndyl	10	12.7%	0	0%	69	87.3%	79	
Meadow	177	97.8%	4	2.2%	0	0%	181	
Oak City	0	0%	0	0%	271	100%	271	
Scipio	3	1.5%	1	0.5%	198	98%	202	



Table 11. Broadband Speeds Available in Piute County

	UNSERVED (I 25/3 MBF	BELOW PS)	UNDERSEF (BELOW 10 MBPS)	RVED 00/20	SERVED (ABOVE 100/20 MBPS)		TOTAL FCC
CITY	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	LOCATIONS
County							
Piute	126	10.8%	245	21%	796	68.2%	1,167
			Major C	ity			
Circleville	7	2.1%	2	0.6%	320	97.3%	329
Junction	3	1.9%	0	0%	155	98.1%	158
Kingston	6	6.1%	92	93.9%	0	0%	98
Marysvale	8	2.3%	78	22.5%	261	75.2%	347



COUNTY OR	UNSERVED (BELOW 25/3 MBPS)		UNDERSERVED (BELOW 100/20 MBPS)		SERVED (ABOVE 100/20 MBPS)		TOTAL FCC
CITY	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	LOCATIONS
			County	y			
Sevier	469	4.8%	390	4%	9,010	91.3%	9869
			Major Ci	ity			
Annabella	0	0%	0	0%	322	100%	322
Aurora	0	0%	4	0.9%	423	99.1%	427
Central Valley	0	0%	0	0%	259	100%	259
Elsinore	0	0%	1	0.3%	396	99.7%	397
Glenwood	0	0%	0	0%	209	100%	209
Joseph	10	6.5%	75	48.7%	69	44.8%	154
Koosharem	1	0.5%	0	0%	212	99.5%	213
Monroe	3	0.3%	2	0.2%	1,033	99.5%	1,038
Redmond	0	0%	0	0%	331	100%	331
Richfield	16	0.5%	0	0%	2,918	99.5%	2,934
Salina	3	0.3%	4	0.4%	1,099	99.4%	1,106
Sigurd	0	0%	5	2.6%	184	97.4%	189

Table 12. Broadband Speeds Available in Sevier County



Table 13. Broadband Speeds Available in Sanpete County

	UNSERVED (E 25/3 MBP	BELOW PS)	WUNDERSERVED (BELOW 100/20 (AE MBPS)		SERVE (ABOVE 1) MBPS	SERVED (ABOVE 100/20 MBPS)	
CITY	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	LOCATIONS
			Count	y			
Sanpete	2026	15.5%	386	2.9%	10,675	81.6%	13,087
			Major C	ity			
Centerfield	0	0%	0	0%	564	100%	564
Ephraim	0	0%	19	1.2%	1,514	98.8%	1,533
Fairview	0	0%	0	0%	645	100%	645
Fayette	61	45.2%	74	54.8%	0	0%	135
Fountain Green	0	0%	0	0%	468	100%	468
Gunnison	10	1.3%	5	0.7%	729	98%	744
Manti	0	0%	1	0.1%	1,367	99.9%	1,368
Mayfield	0	0%	24	7.7%	288	92.3%	312
Moroni	0	0%	0	0%	558	100%	558
Mount Pleasant	7	0.5%	0	0%	1,330	99.5%	1,337
Spring City	0	0%	0	0%	540	100%	540
Sterling	0	0%	0	0%	137	100%	137
Wells	0	0%	0	0%	152	100%	152



Table 14. Broadband Speeds Available in Wayne County

	UNSERVED (I 25/3 MBF	BELOW PS)	UNDERSER (BELOW 10 MBPS)	RVED 00/20	SERVED (ABOVE 100/20 MBPS)		TOTAL FCC
CITY	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	LOCATIONS
County							
Wayne	251	12.6%	53	2.7%	1,693	84.8%	1,997
			Major C	ity			
Bicknell	2	0.9%	0	0%	223	99.1%	225
Hanksville	0	0%	0	0%	114	100%	114
Loa	0	0%	0	0%	267	100%	267
Lyman	8	5.5%	0	0%	137	94.5%	145
Torrey	9	3.1%	0	0%	281	96.9%	290



Table 15. Summary of Broadband Speeds Available in Six County AOG

COUNTY	UNSERVED (E 25/3 MBP	UNSERVED (BELOW 25/3 MBPS)		UNDERSERVED (BELOW 100/20 MBPS)		SERVED (ABOVE 100/20 MBPS)	
	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	
			County	/			
Juab	653	14.9%	443	10.1%	3,284	75%	4,380
Millard	1,376	22.9%	266	4.4%	4,357	72.6%	5,999
Piute	126	10.8%	245	21%	796	68.2%	1,167
Sevier	469	4.8%	390	4%	9,010	91.3%	9,869
Sanpete	2026	15.5%	386	2.9%	10,675	81.6%	13,087
Wayne	251	12.6%	53	2.7%	1,693	84.8%	1,997
			Six County AO	G Totals			
Six County AOG	4,901	13.4%	1,783	4.9%	29,815	81.7%	36,499



Survey Results

The Six County AOG Broadband Survey asked respondents to indicate if they had a household internet connection. Of 181 respondents, 169 responded "Yes, I have an internet connection at my residence" and 12 responded "No, I don't have an internet connection at my residence." This data is detailed in Figure 45 below.



Figure 45.Percentage of Survey Respondents with a Household Internet Connection

The Six County AOG Broadband Survey also included targeted questions related to business connectivity. Survey participants were asked, "Do you have an internet connection at your business?" There were 28 responses to this question with 71% indicating that they did have internet at their business. See Figure 46 Business Internet Connection below.





Figure 46 Six County AOG Business Connectivity

Those with businesses were also asked if the speeds or reliability of their internet connection has impacted their business. Of 14 responses, 71% indicated that internet connectivity has impacted their business. See Figure 47 Internet Connectivity Impact on Business below.





Figure 47. Internet Connectivity Impact on Busineses

Internet Speed Test

In order to correctly gauge accuracy of FCC Broadband Data and ISP coverage areas, it was requested that stakeholders perform internet speed tests throughout Six County AOG. While not every stakeholder performed a speed test, those that did helped the outreach team gain insight into the current state of broadband availability. Speed tests were also compared against ISP data and FCC broadband data to determine any gaps or discrepancies in the information provided by those organizations.

These real-time internet download and upload speeds, while beneficial, did not come without limitations. For example, customers may opt to pay for a lower speed tier vs. paying a higher dollar amount in return for faster speeds. In addition, hardware such as routers, switches, or hubs may be defective in final mile infrastructure, thus resulting in lower speeds. Figure 48 through Figure 54 shows all the speed test locations throughout Six County AOG. Figure 55 shows all the speed test results along with all the FCC unserved and underserved locations. Table 16 shows the Internet Speed Test results.

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Figure 48: Speed Test Results in the Six County AOG

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Figure 49: Speed Test Results for Juab County

10







Figure 50: Speed Test Results for Millard County

10

20 Miles

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Figure 51: Speed Test Results for Piute County



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Figure 52: Speed Test Results for Sanpete County



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Horrocks.

Figure 53: Speed Test Results for Sevier County

14 ■ Miles

Date: 7/20/2023 12:45 PM



Figure 54: Speed Test Results for Wayne County

1	9			
	IN	lil	e	s

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Figure 55: Unserved Speed Test Results and Underserved/Unserved FCC Locations in the Six County AOG



DOWNLOAD SPEED	NUMBER OF TESTS	JUAB	SANPETE	MILLARD	SEVIER	PIUTE	WAYNE
No Service	2	0	1	0	1	0	0
Below 10 Mbps	199	10	30	78	74	1	6
Below 25 Mbps	211	7	16	56	114	6	12
Below 500 Mbps	519	39	104	79	268	4	25
Above 500 Mbps	6	0	0	0	5	0	1
Total Speed Tests	937	56	151	213	462	11	44

Table 16.Speed Test Results

Middle Mile

The UDOT fiber network is the primary statewide fiber network. State highways that do not yet have UDOT fiber in them often do not have any fiber in them due to their remote locations.

On the UDOT fiber map, sections of highway are marked if they are a priority area UDOT wishes to run fiber through or if they are segments of road that have projects or funding for deploying fiber in the near future. Figure 56 shows the current UDOT fiber network along with future needs projects and FCC unserved and underserved locations. Middle mile fiber needs in Six County AOG would improve connectivity for the more rural areas in this region.



Figure 56: UDOT Fiber Network with Fiber Needs and Grant Requests in Six County AOG



Projected Growth in Six County AOG

Over the next 10 years, the projected growth is minimal throughout the majority of Six County AOG, with small pockets of denser growth in Juab and Sanpete counties. Figure 57 shows the 10-year growth estimates from the U.S. Census, known as Traffic Analysis Zones (TAZ)²².

²² Traffic Analysis Zones. July 2023. https://www.arcgis.com/home/item.html?id=81adbf0ae9eb47a89a9e0cf569010e16

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Figure 57: Projected 10 Year Population Growth of the Six County AOG



Survey Results

The Six County AOG Broadband Survey asked respondents what company they use for internet service. There were 153 responses to this question, with 42% of respondents indicating that CentraCom was their ISP. The second most frequently selected ISP was Infowest with 12% of respondents indicating that was their service provider. This data is detailed in Figure 58 below.



Figure 58. ISP Providers



3.5.2 Digital Access

There are many barriers to digital access in Six County AOG which have made it difficult for residents to access high-speed broadband internet. These barriers include affordability, digital literacy, lack of devices, language barriers, and community anchor institutions with lack of access to broadband connectivity and/or devices. To address these needs, it is important to prioritize initiatives that improve digital literacy and provide affordable access to high-speed internet, particularly in underserved areas of the Six County AOG.

Covered Populations

A covered population refers to a group of individuals who are eligible for a particular program or intervention based upon economic or socioeconomic factors. The goal of defining a covered population is to target resources and focus them on those who are most in need.

Table 17 below shows covered populations in Six County AOG. In addition to margin of error estimates, categories are not mutually exclusive; as such, percentages do not total 100.

		PERCENT OF POPULATION							
COUNTY	AGE 60 AND OVER	DISABILITY	VETERANS	INCARCERATED POPULATION	NOT WHITE OR HISPANIC				
Juab	17%	12.8%	5.6%	.28%	3.2%				
Millard	22.2%	13.7%	6.9%	.4%	4.4%				
Sanpete	19.8%	11.8%	4.5%	.39%	4.7%				
Wayne	29.5%	13.7%	7.7%	0%	1.8%				
Sevier	22.3%	15.1%	8.3%	.43%	3.1%				
Piute	37.6%	20.7%	7.1%	0%	1.5%				

 Table 17. Covered Populations

Figure 59 through Figure 62 show covered populations with more than a 10% variance within Six County AOG. Covered populations not depicted in the figures below do not show a significant variance throughout the Six County AOG region.

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Figure 59: Population with Disabilities in the Six County AOG

Miles

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Figure 60: Non-White Population in the Six County AOG

0 5 10 20 30 40

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Figure 61: Population Age 60+ in the Six County AOG

0 5 10 20 30 40

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Figure 62: Incarcerated in the Six County AOG



Internet Subscription Rates

Six County AOG recognizes the vital role that broadband internet plays in the community. Census data provides valuable insights into the adoption and accessibility of broadband services among the population. This data assists in identifying areas of opportunity and addressing existing gaps in broadband access.

Table 18 lists the internet subscription rates within Six County AOG.23

COUNTY	TOTAL HOUSEHOLDS	HOUSEHOLDS WITHOUT AN INTERNET SUBSCRIPTION	% WITHOUT AN INTERNET SUBSCRIPTION
JUAB	3,500	437	12.5%
MILLARD	4,204	715	17%
SEVIER	7,250	988	13.6%
SANPETE	8,612	1,254	14.6%
PIUTE	538	152	28.3%
WAYNE	1,055	167	15.8%

Table 18. Internet Subscription Rates

²³ U.S. Census Bureau. (2021). American Community Survey 5-Year Estimates. S2801 - Types of Computers and Internet Subscriptions. <u>https://data.census.gov/table</u>



The Six County AOG Broadband Survey asked respondents what they use their household internet for. There were 155 responses to this question, and most respondents indicated they were using the internet for entertainment, shopping, videoconferencing, remote learning, and remote healthcare. This data is detailed in Figure 63 below.



Figure 63. Household Internet Use



The Six County Broadband Survey asked respondents about device access in their community. Ninety-seven respondents answered this question. Of those, 38% percent of respondents stated that most individuals have access to a tablet or smartphone at home while 23% of respondents said that individuals have access to a desktop or laptop computer at home. This information is detailed in Figure 64 below.



Figure 64. Device Access



The survey included a question about how people in their community could access internetconnected devices if they were not available in their homes. There were 99 responses to this question, with school, library, and work being where most people can have access to community devices. The data is included in Figure 65.



Figure 65. Community Access to Internet-Capable Devices



Broadband Affordability

The Six County AOG Broadband Survey asked respondents what the monthly charge is for their household internet service. There were 140 responses to this question with 21% of respondents indicating they pay between \$40.01 and \$50 for monthly internet service. This data is detailed in Figure 66 below.



Figure 66. Monthly Household Internet Cost



Survey respondents were also asked about their awareness of the Affordable Connectivity Program (ACP). Of 157 responses to this question, 62% of respondents shared they were not aware of the ACP and 34% of respondents shared that they were aware of the program. Information is detailed in Figure 67.



Figure 67. Affordable Connectivity Program Awareness



4 OBSTACLES OR BARRIERS

The project team has identified various obstacles related to broadband deployment and adoption within Juab, Millard, Piute, Sanpete, Sevier, and Wayne Counties. Specific obstacles related to high-speed broadband internet availability, digital access, and affordability, are identified below.

- **Physical Barriers**: The geographic properties of Six County AOG contain physical barriers that block the implementation of internet infrastructure. For instance, the range of mountains in the most isolated areas of each county creates additional limitations for building infrastructure. These physical obstacles to high-speed broadband internet availability and digital access must be addressed to ensure that everyone can participate in the digital age.
- **Digital Access Barriers**: Income and internet literacy limitations are primary digital access barriers present in Six County AOG. Low-income neighborhoods lack the financial resources needed to purchase internet service and associated equipment, while lack of digital literacy makes it difficult for people to access online resources. To address these digital access barriers, it is important to consider strategies such as providing affordable internet service and equipment, offering digital literacy training, and partnering with community organizations to increase outreach and engagement.

• Permitting and Right-of-Way

It is important to obtain various permits at the earliest stages of implementation. This includes coordinating with utilities; addressing canal and waterway crossings; securing railroad permits; obtaining federal, state, and local permits in the right-of-way; and obtaining easements when broadband equipment encroaches land outside of the public right-of-way.


Table 19 shows many of the permitting entities within Six County with longer lead times. Figure 68 shows land ownership throughout the region, which informs permitting. Initiating the permitting application process promptly is essential to meet any of the funding opportunity's implementation deadlines. It is important to note that this list is not an exhaustive list and may evolve between the publication of this plan and the construction phase.



Table 19. Permitting Agencies

LEVEL	APPROXIMATE TIMEFRAME FOR PERMITTING	ENTITY
Local	30 Days	Local municipalities within the Six County region
Local	30 Days	Juab, Millard, Piute, Sanpete, Sevier,and Wayne County Engineering
State	30 Days	State Parks and Recreation
State	30 Days	State Trust Lands
State	30 Days	State Wildlife Reserve
State	30 Days	UDOsT
Federal	180 Days	Bureau of Indian Affairs
Federal	180 Days	Bureau of Land Management
Federal	180 Days	National Park Service
Federal	180 Days	U.S. Corps of Engineers
Federal	180 Days	U.S. Forest Service
Utility	45 Days	Electrical Company
Utility	45 Days	Gas Company
Utility	45 Days	Other Telecom
Tribal	Unknown	Tribal Lands





Figure 68: Land Ownership in the Six County AOG

Miles



The Six County Broadband Survey asked respondents to explain how they percieve internet access in their community. There were 107 responses to this question with 54% of respondents saying that some people want provider options than those that currently are available to them. Additionally, 37% of respondents said that some people cannot afford the internet options available to them. This data is detailed in Figure 69 below.



Figure 69. Six County Community Internet Access



The Six County Broadband Survey asked respondents what barriers make it difficult for individuals to access the internet. Of 96 respondents, the most common barrier to internet access was affordability. This data is detailed in Figure 70 below.



Figure 70. Barriers to Internet Access



The Six County AOG Broadband Survey asked respondents what would make it easier for individuals to access the internet. Of 97 responses, 67% cited lower costs as a way to make it easier to access the internet. This data is detailed in Figure 71 below.



Figure 71. Ways to Increase Internet Adoption



The survey included a question about what the biggest barriers are for access to internetcapable devices. Of 20 survey responses to this question, 19 people referenced affordability of devices as an obstacle, as detailed in Figure 72.



Figure 72. Barriers to Accessing Devices



The survey included a question about what would make it easier for individuals in their area to access internet-capable devices. Of 74 survey responses, 81% of people shared that if device costs were lower, it would help address the barrier to internet-capable device access. Information is included in Figure 73.



Figure 73. Potential Solutions for Easier Device Access



5 IMPLEMENTATION PLAN

The deployment of broadband infrastructure and expanded digital access throughout Six County AOG City follows the priorities, actions, strategies, and stakeholder involvement set forth in the implementation plan. With an emphasis on addressing the identified needs and gaps in broadband availability, affordability, and adoption, the plan lays out a roadmap for achieving universal access. The plan includes a projected timetable and cost as well as planned activities, key strategies, and stakeholder engagement. This implementation plan ensures that access to the possibilities and resources that come with dependable broadband infrastructure and connection are available to residents of Six County AOG. The implementation plan seeks to build a more connected community with a strong commitment to stakeholder involvement and collaboration.

5.1 PRIORITIES

The priorities defined in Table 20 act as the foundation for executing the Six County AOG broadband plan. These priorities have been established to ensure that the plan is in line with the community's vision for broadband infrastructure and digital access. In focusing on and communicating these priorities, the local governments in the Six County area can concentrate efforts on attaining the most crucial broadband goals and objectives.

PRIORITY	RANKING	DESCRIPTION
Establishing high-speed internet for all underserved areas.	High	Establish connection to areas that need a greater level of service.
Provide more reliable infrastructure and connectivity to rural areas along major highways or other areas identified as priorities by Six County AOG planners.	High	These areas include: Juab County – Highway 6, Highway 36 Millard County – Highway 21, Highway 161, Highway 50, US 6 Sevier County – Highway 24, Highway 118, Hwy 50, Highway 89 Sanpete County – US 89, US 28, Highway 117 Piute County – US 24 Wayne County – Highway 12, Highway 24
Encourage Cities and Counties to partner with ISPs to ensure service to the entire city and bring fiber to the homes.	Medium	There are currently ten ISPs that have franchise agreements with the communities in the region which allow them to build new infrastructure. Encourage municipalities to look at all options ISP options in their area.
Encourage middle mile development	High	Work with UDOT and ISPs to identify and advocate for middle fiber where gaps exist.

Table 20. Priorities for Broadband Deployment and Digital Access



5.2 KEY EXECUTION STRATEGIES

Drawing on the vision and goals in the Priorities section above, this section explains the specific strategies that Six County AOG will undertake to realize those goals.

GOAL 1: Infrastructure Assist the rural, unserved, and underserved communities of the Six County AOG to expand access to high-speed internet through infrastructure development.

OBJECTIVE	STRATEGY
Provide Six County Area Governments with the tools and resources to develop effective policy, relationships and education to expand and enhance local broadband access	Assist in developing dig once policies that fit the context of the individual governments in Six County Support state and local legislation to fund and reach "high-cost areas" Identify and share broadband funding mechanisms with area governments

GOAL 2: Education Maximize the benefits and value of high-speed internet through education and digital skill building initiatives.

OBJECTIVE	STRATEGY
	Mobilize local government, private and civic sectors to increase access to connected devices
Decrease the digital divide and increase access to devices, training, and affordable internet tools.	Participate and share initiatives and programming related to digital literacy, expanded broadband access and affordable service options
	Share policies, programs and partnerships that support expanded access to high-speed internet

GOAL 3: Affordability Assist in increasing affordable, reliable, high-speed home internet options for Six County Area governments, businesses and residents.

OBJECTIVE	STRATEGY
Ensure that all governments, businesses and residents have the option to access affordable high-speed internet	Work with local governments to advocate for affordable, high-speed internet and elevate efforts aiming to decrease the cost of connectivity.



5.3 PLANNED ACTIVITIES

The purpose of this section is to outline activities that will support universal service, identify key players responsible for implementing these activities, specify funding sources, and highlight the expected outcomes in terms of broadband availability, digital access, and broadband affordability. Universal service is the principle that all Americans should have access to both telecommunications and high-speed internet at just, reasonable, and affordable rates.

PLANNED ACTIVITY	KEY PLAYERS	FUNDING SOURCES	TIMELINE	EXPECTED OUTCOMES
Encourage collaboration between cities, counties, and ISPs to install broadband infrastructure during new construction and development	Community and economic development department AOG Cities Counties SSD	UBC USDA NTIA	1-5 Years	Increased broadband access in unserved or underserved areas
Encourage Cities and Counties to notify ISPs to notify when doing a construction project	Community and economic development department Cities Counties SSD ISPs	N/A	1 Year	Ideally this will result in expedited expansion of coverage in the Six County Region
Monitor and share state and federal funding opportunities	AOG	N/A	1-3 Years	Aid in expansion of broadband infrastructure
Share area broadband developments with the executive board twice yearly	AOG Cities Counties SSD	AOG Cities N/A Counties SSD		Ensure Stakeholders are aware of progress
Track local and federal legislation specific to broadband	AOG Cities Counties State and Federal Government	N/A	Ongoing	Legislation that supports the expansion of high- speed internet to rural communities

Table 21. Infrastructure



Encourage any AOG level planning activities to include broadband supportive language	AOG Planners Cities Counties Towns	UBC	1-5 Years	Increase in planning will assist in identifying areas of need
Coordinate transportation planning efforts and construction with UDOT and ISPs to increase middle mile infrastructure	AOG Mobility Management UDOT ISPs	AOG	Ongoing	Better local connectivity and more options for last-mile connections
Explore opportunities to cover broadband infrastructure as an eligible cost for existing AOG funding mechanisms	AOG Economic Development	N/A	Ongoing	Additional funding mechanisms for local ISPs to construct and install broadband
Provide area governments with best practices for broadband expansion guide	AOG Counties Cities	USDA Technical Assistance Grant	1 year	Implementation of local ordinances that support accelerated infrastructure installation

Table 22. Education

PLANNED ACTIVITY	KEY PLAYERS	FUNDING SOURCES	TIMELINE	EXPECTED OUTCOMES
Undertake an asset mapping effort to document and share the digital skills resources available in the Six County Area	AOG Counties Cities Towns School Districts Universities Libraries	Utah Broadband Center Digital Access Implementation Funding	1 year	A comprehensive database of the various providers in the Six County Area offering digital skills training and technical support



Look for opportunities to build digital skills training into existing programming and AOG offerings	AOG		2 years	Access to broadband is emphasized throughout all levels of the AOG and adoption is increased in the area
Leverage and empower existing partners offering digital skills training and technical support to expand their programming	AOG School Districts Libraries Universities Non-profits	Utah Broadband Center Digital Access Implementation Funding	Ongoing	Increased local access to digital skills training and technical support

Table 23. Affordability

PLANNED ACTIVITY	KEY PLAYERS	FUNDING SOURCES	TIMELINE	EXPECTED OUTCOMES
Gather more granular level detail about broadband coverage, adoption, and barriers to entry throughout the Six County Area	AOG Counties Cities Towns School Districts	USDA Broadband Technical Assistance Grant	1 year	A clearer understanding of what is
Encourage AOG departments and partnering agencies working with federal and state subsidy programs to identify strategies to build digital adoption into their client coordination	AOG Staff	N/A	1-3 Years	Increased number of seniors and low-income households with access to the internet and phone service
Encourage local governments to work with ISPs to increase enrollment in low- cost plan options	Cities Towns AOG	N/A	1-3 Years	Increased number of low-income households with an in-home high- speed internet connection

Assist local governments in increasing the number of provider options in their area through active recruitment of new providers	AOG Counties Cities Towns ISPs	N/A	Ongoing	Competition among providers will drive down end pricing to residents and businesses
Advocate for effective broadband policy and funding that will increase connectivity in the Six County area	AOG Local governments State government	N/A	Ongoing	A unified voice will ensure that the digital access needs of the Six County area are clearly communicated to local, state and federal law makers.

5.4 ONGOING STAKEHOLDER ENGAGEMENT

Continued stakeholder engagement is vital to the success of Six County AOG's broadband deployment strategies. The Six County AOG will continue to build strong relationships with community partners and key stakeholders as this plan is implemented. The success of getting all residents connected to reliable high-speed internet will be dependent on the ability to continually coordinate efforts with local community partners.

Key initiatives to support continued engagement include:

- **Create a Broadband Working Group:** This working group should be diverse and represent a variety of roles. Important representation in this group includes municipal officials, educators, community influencers, business leaders, Tribal leaders, technical experts, and organizations that represent the covered populations. A broadband working group will ensure that there is county-wide support for resulting broadband projects.
- Meet with Internet Service Providers: Building a relationship with an internet service provider (ISP) can be beneficial for both Six County AOG and the ISP. By working together, Six County AOG can help to ensure that their residents have access to high-quality, affordable broadband internet.

The following strategies promote the establishment of a collaborative partnership with local ISPs:



- IMPORTANT: Only meet with one ISP company at a time. Ask them to share their future build-out plans for Six County AOG. They are more willing to share information when their competition is not in the room.
- Streamline permitting and processes: Review and streamline the permitting and approval processes for ISPs to facilitate efficient infrastructure deployment.
- Create incentives: Offer incentives such as tax breaks or expedited permit processing for ISPs that invest in broadband infrastructure.
- Foster public-private partnerships: Explore opportunities for public-private partnerships with ISPs to leverage resources, expertise, and funding.
- Collaborate on funding opportunities: Work together with ISPs to identify and pursue available funding sources, grants, or subsidies for broadband projects.
- Share infrastructure resources: Explore possibilities for sharing existing infrastructure, such as utility poles or conduit, to reduce costs and deployment timelines.
- Regular communication and updates: Establish regular communication channels to keep ISPs informed about city initiatives, policies, and upcoming projects related to broadband infrastructure.
- **Continue Stakeholder Communication:** Stakeholder communication that is frequent and transparent helps build and maintain community support. The Six County AOG should aim to educate, garner support, and celebrate accomplishments through stakeholder communication. Tactics for communicating with stakeholders should be varied and represent traditional and virtual engagement. Specific tactics to continue stakeholder communication include:
 - Meet and coordinate regularly with local ISPs to understand expansion priorities and track progress of ongoing projects.
 - Engage the public, community partners, and businesses to perform their own Internet Speed Tests and FCC map challenges.
- Identify and Update Community Priorities: Each community within Juab, Millard, Sevier, Piute, Sanpete, and Wayne Counties has different needs, resources, technologies, financing, and partnership options. Reevaluation of priorities will be required to keep community members engaged, achieve a local vision of connectivity, and increase broadband utilization. Updates to the Local Broadband Plan may become necessary through the process of planning, implementing, and evaluating success.
 - Continue gathering input and perspectives through a year-round publiclyavailable local broadband survey. As projects and initiatives are implemented, the survey may be adapted to measure the success of that programming.



- Coordinate with City and County staff within Juab, Millard, Sevier, Piute, Sanpete, and Wayne Counties to align community priorities among the counties.
- Understand Regional Context: By establishing and strengthening working relationships with a variety of stakeholders, the Six County AOG may identify additional opportunities, barriers, or initiatives. Continued coordination with key stakeholders will allow the Six County AOG to clearly communicate the benefits of connectivity, empower local entities to advocate for broadband initiatives, and build enthusiasm and support for projects. This may be accomplished through:
 - Continued engagement with the Tribal communities in the Six County AOG region to understand priorities, opportunities, and offer a coordinated approach to project implementation.
 - Meetings with rural educators to understand connectivity needs.
 - Coordination with the school and library districts within the Six County AOG region to educate residents and students about benefits of connectivity, and better understand their needs.
- Advertise and Continue to Increase Enrollment in the ACP:
 - Expand awareness of ACP benefits to rural community members and households with school-aged children.
 - Identify ACP champions and explore options throughout the Six County organization to include ACP information and enrollment assistance for those in need.



5.5 ESTIMATED TIMELINE FOR UNIVERSAL SERVICE

Universal service is the goal of providing broadband service to every resident of Six County AOG. Achieving this goal depends upon receiving sufficient funding for broadband infrastructure projects, the timeline by which ISPs build at, and the timeline by which the BEAD program is administered by. Due to this timeline being determinant on external elements, Six County AOG intends to communicate closely with all ISPs building in the area and follow the state timeline as listed in the statewide Digital Connectivity Plan. The state aims to provide universal broadband service for all Utahns by December 31, 2028. The timeline more specific to items relevant to Six County AOG officials are listed in Section 4.3 of this plan.

Individual Broadband Project Minimum Timeline

It will be up to the ISPs to carry out the design and construction of broadband infrastructure projects within Six County AOG, however, a sample broadband project timeline is listed here for reference. An estimated timeline concerning activities necessary to implement broadband services include the following:

STEP	DESCRIPTION	TIMELINE
High-Level Design (HLD)	Create a preliminary FTTP (Fiber to the Premise) design before fielding and jurisdictional research	30-60 Days
Low-Level Design (LLD)	Create a FTTP design that is constructable using fielding data and jurisdictional research	60-90 Days
Permitting	Get approval from the appropriate jurisdictions for construction	Up to 180 Days
Construction	Build a functioning FTTP network	90-180 Days
Project Audit	Review construction documents, conduct AARs, create audit documentation	Up to 90 Days

Table 24. Broadband Infrastructure Project Design and Build Phase Estimated Timeline for ISPs

Note that some of these phases may overlap, while others must be completed sequentially. Unforeseen circumstances or delays might impact the overall timeline.

Minimum duration: 30 days (HLD) + 60 days (fielding and LLD) + 180 days (permitting) + 90 days (construction) = 360 days (about 1 year) for full turn-key implementation.

If some phases can be completed concurrently, the duration could be shortened. For example, construction can be started on certain segments of the broadband build that have approved permits much sooner than the predicted 180 days, shortening the original estimate for the overall project duration.



It is crucial to account for potential delays and other factors that may affect the project schedule. Regular communication with relevant stakeholders and close monitoring of progress can help mitigate risks and keep the project on track.

5.6 ESTIMATED COST FOR UNIVERSAL SERVICE

An estimated cost for the project is calculated using GIS analysis, incorporating data from various sources such as the State of Utah's roads layer and address points, as well as FCC data on served, underserved, and unserved points. The length attribute from the roads layer is used to determine the distance, considering several key parameters including aerial percentage, aerial cost, and underground cost (can vary based on the location geology).

The estimated cost for materials, design, and installation can vary. Costs for aerial fiber hung on power poles can range up to \$10/FT. Underground fiber costs range from \$30/FT when installing in easy-to-bore areas, up to \$35-\$60/FT when boring in rocky or hilly areas.

The formula for calculating the total cost of construction is as follows:

Total Cost of Construction = ((Road Length * Aerial Cost * Aerial Percentage) + (Road Length * Underground Cost * (1 – Aerial Percentage)))

For this estimate, the following numbers were used:

Aerial Cost: \$10/FT

Underground Cost: \$30/FT

Aerial Percentage: 99%

To obtain the cost per passing, the total cost of construction is divided by the count of address points (in some instances FCC points) within a defined geographic area, as determined by a polygon selection. This methodology ensures that the estimated cost is derived from reliable data sources and considers the specific characteristics of the project area, providing an accurate and comprehensive financial projection for the implementation of universal services.

This methodology ensures that the estimated cost is derived from reliable data sources and considers the specific characteristics of the project area, providing an accurate and comprehensive financial projection for the implementation of universal services. See Table 25 for the Estimated Cost for Universal Service, and Figure 74 through Figure 78 for the corresponding area maps.



Table 25. Estimated Cost for Broadband Deployment in Six County AOG

	SIX COUNTY AOG								
AREA	Total Length (Miles)	Aerial %	Total Cost (Dollars)	Cost Per Passing (Dollars)	# Of Locations	Under- Served	Un- Served	Cost For Just Un-Served & Underserved	
	Juab County								
Callao	8.77	99%	472,144.58	17,486.84	27	0	1	\$17,486.84	
Eureka	14.21	99%	765,431.53	2,162.24	354	3	16	\$41,082.56	
Levan	35.6	99%	1,917,233.80	6,265.47	306	270	3	\$1,710,473.31	
Mammoth- Silver City	6.81	99%	367,025.21	12,656.04	29	29	0	\$367,025.16	
Mills 1	12.64	99%	680,879.96	52,375.38	13	11	2	\$680,879.94	
Mills 2	6.76	99%	363,946.87	15,823.78	23	6	17	\$363,946.94	
Nephi	151.8	99%	8,175,594.21	3,467.17	2358	140	29	\$585,951.73	
Tintic	3.79	99%	204,201.06	68,067.02	3	3	0	\$204,201.06	
				Millard County					
Abraham	6.71	99%	361,320.17	15,709.57	23	4	19	\$361,320.11	
Deseret	7.9	99%	425,445.27	3,082.94	138	81	57	\$425,445.72	
Flowell	5.65	99%	304,226.93	8,947.85	34	12	0	\$107,374.20	
Gunnison River Bend	7.42	99%	399,378.21	2,543.81	157	157	0	\$399,378.17	
Harding Oasis	43.05	99%	2,318,682.07	19,988.64	116	101	15	\$2,318,682.24	
Kanosh	13.76	99%	741,168.09	3,088.20	240	94	157	\$775,138.20	
Leamington	14.55	99%	783,754.06	7,060.85	111	74	37	\$783,754.35	
Meadow	11.58	99%	623,641.22	3,214.65	194	2	192	\$623,642.10	
Oasis	7.32	99%	394,435.54	8,964.44	44	7	37	\$394,435.36	
Sugarville	13.84	99%	745,237.46	39,223.02	19	0	19	\$745,237.38	
Sutherland	8.91	99%	480,117.28	12,310.70	39	39	0	\$480,117.30	
Woodrow	13.59	99%	731,773.90	13,807.05	53	34	19	\$731,773.65	
				Piute County					
Greenwich	2.95	99%	158,637.38	7,931.87	20	20	0	\$158,637.40	
Junction	16.65	99%	896,832.76	5,640.46	159	18	4	\$124,090.12	



31,377.86

32,894.15

26,484.99

5.643.36

3,353.00

88

411

41

43

168

85

234

35

42

167

3

177

6

1

1

\$2,761,251.68

\$13,519,495.65

\$1,085,884.59

\$242,664.48

\$563,304.00

(2) Mount

(3) Mount

(4) Pigeon

Pleasant

Pleasant

Hollow

Wales

Stearling

99%

99%

99%

99%

99%

2,667,118.40

13,519,496.81

1,085,884.51

242,664.28

563,303.21

16.95

85.92

20.16

4.51

10.46



	SIX COUNTY AOG							
AREA	Total Length (Miles)	Aerial %	Total Cost (Dollars)	Cost Per Passing (Dollars)	# Of Locations	Under- Served	Un- Served	Cost For Just Un-Served & Underserved
				Sevier County				
Burrville	2.29	99%	123,098.07	4,244.76	29	28	1	\$123,098.04
Joseph	11.34	99%	610,808.56	3,890.50	157	88	1	\$346,254.50
Salina	93.56	99%	14,721,868.20	56,190.34	262	0	154	\$8,653,312.36
Sevier	6.33	99%	995,815.65	24,895.39	40	30	1	\$771,757.09
Wayne County								
Grover	21.25	99%	1,144,283.79	20,850.16	55	17	32	\$1,021,657.84
Teasdale	9.13	99%	491,484.56	3,809.96	129	120	9	\$491,484.84





Figure 74. Unserved/Underserved Areas in Juab County





Figure 75. Unserved/Underserved Areas in Millard County



Figure 76. Unserved/Underserved Areas in Sevier County





Figure 77. Unserved/Underserved Areas in Sanpete County





Figure 78. Unserved/Underserved Areas in Piute and Wayne Counties

5.7 ALIGNMENT

The Six County AOG Local Broadband Plan is closely aligned with local broadband priorities and the Utah Digital Connectivity Plan, which include establishing high-speed internet in all unserved areas and underserved areas and further addresses the need for more reliable infrastructure and connectivity.

By partnering with ISPs, Six County AOG aims to ensure comprehensive coverage throughout the entire city and bring fiber-to-the-home connectivity. The Local Broadband Plan emphasizes the importance of connecting critical infrastructure to fiber, enhancing the reliability and resilience of essential services. By prioritizing the deployment of fiber-optic networks, Six County AOG seeks to strengthen the broadband infrastructure and support future growth and technological advancements.

5.8 TECHNICAL ASSISTANCE

The successful implementation of the local broadband plan in Six County AOG requires support and technical assistance from the UBC in addition to Telecommunication Consultant/Contractor services.

This support encompasses various areas, such as broadband infrastructure development, policy guidance, and access to funding opportunities.



Specific to Six County, local governments are looking for support in knowing who to contact and where to reach out to ISPs to begin communications, establish relationships and understand the ISPs local expansion plans. The assistance from UBC in bringing together local governments and ISPs to launch those relationships would be helpful.

The UBC could also act as a resource to local governments seeking to understand and translate ISP requests, permits, designs and other technical aspects that are outside of the standard knowledge of the local government staff or official. The local governments of the Six County area could use help in navigating agreements that offer terms favorable to that municipality. This could include gaining an understanding of what is negotiable in an ISP arrangement, specifics that should be included in design, and how to craft code and ordinances that protect the municipality.

The UBC should also offer to review and redline franchise agreements to provide feedback on elements of the agreement that could be detrimental to the municipality and how to improve the overall benefit to the municipality from the agreement.

By partnering with the UBC and accessing necessary data, Six County AOG will have the support and information required to implement the local broadband plan successfully. This collaboration will address the digital divide, enhance broadband accessibility, and drive economic development through digital infrastructure.



6 CONCLUSION

In conclusion, the Local Broadband Plan outlined above serves as a comprehensive road map for maximizing the potential of broadband technology to drive economic growth, enhance connectivity, and foster innovation. By assisting Six County governments to expand high-speed internet access to rural communities and supporting programs and efforts that build digital skills, the Local Broadband Plan aims to create a more prosperous future for all communities in the Six County area. Through collaboration among government entities, private sector partners, agencies, and community stakeholders, this Local Broadband Plan establishes a solid foundation for harnessing the transformative power of high-speed internet to empower individuals, businesses, and communities alike.

Note: These priorities were informed by stakeholder input and technical analysis. As the plan is implemented, other strategic focus areas may arise, and this plan may be updated to meet that need.

Expected Outcomes

The digital world offers an unprecedented amount of economic mobility. With an abundance of online learning programs ranging from GEDs to advanced certifications, fully remote job opportunities, free financial tools, and more, the potential for economic mobility is vast. However, it is important to acknowledge that the benefits of the internet in fostering economic mobility are only accessible to those who have the means to connect. This discrepancy between opportunity and access is commonly known as the digital divide.

The Six County AOG Broadband Survey revealed that the ability to work or operate a business remotely, whether from home, the ranch, or in town, has become increasingly vital. Business owners are feeling the impacts of unreliable connectivity and it acts to stifle economic growth and local business investment. *"I have internet at my home, but the signal does not reach my shop next door."*

Six County Broadband Survey Response

Community members highlighted the predicament faced by those with fixed incomes who lack connectivity at home. They must rely on publicly available resources to connect such as the library or senior center. This makes connectivity even harder for those who are unable to travel to access the internet and forces them to organize their schedules around external resources. One survey response said, "The cost of the internet is the biggest barrier to access. Plans don't give you the speeds you need without paying higher prices. This impacts people who are on a limited income."

During the Six County AOG workshop that was held on January 19, 2023, community partners were asked to prioritize their most pressing concern as part of the plan. Overwhelmingly, the response was the urgent need for upgraded infrastructure and affordable plans.



High-speed internet plays a crucial role in connecting Utah residents to employment opportunities, education, health care, commerce, and other vital services. The absence of internet access at home or in businesses places many individuals on the wrong side of the digital divide, perpetuating economic, social, and political disparities.

This plan serves as a road map to materialize the vision of the Six County AOG: equal access to the tools and resources that are offered by reliable, affordable high-speed internet empowering them to fully engage in the thriving digital economy and fostering consequential social and economic growth.



Appendix A: Survey Data

The following pages include the individual responses from surveys gathered as part of the Six County AOG local broadband planning outreach. Survey responses gathered as part of the Connecting Utah statewide survey in the Six County area are also included as part of this appendix.

Q1 What is your address?

Answered: 140 Skipped: 2

ANSWER CHOICES	RESPONSES	
Name	0.00%	0
Company	0.00%	0
Street Address	98.57%	138
Address 2	20.00%	28
City/Town	97.86%	137
State/Province	0.00%	0
ZIP/Postal Code	99.29%	139
Country	0.00%	0
Email Address	0.00%	0
Phone Number	0.00%	0

#	NAME	DATE
	There are no responses.	
#	COMPANY	DATE
	There are no responses.	
#	STREET ADDRESS	DATE
1		6/5/2023 3:43 PM
2		6/3/2023 3:40 PM
3		6/1/2023 8:25 AM
4		5/31/2023 9:47 AM
5		5/31/2023 12:24 AM
6		5/30/2023 6:54 PM
7		5/30/2023 3:36 PM
8		5/30/2023 2:54 PM
9		5/29/2023 3:14 PM
10		5/29/2023 1:16 PM
11		5/29/2023 10:46 AM
12		5/29/2023 9:43 AM
13		5/29/2023 6:58 AM
14		5/28/2023 10:13 AM
15		5/27/2023 11:39 AM
16		5/27/2023 10:59 AM

17	5/27/2023 7:20 AM
18	5/27/2023 4:20 AM
19	5/26/2023 11:33 PM
20	5/26/2023 8:52 PM
21	5/26/2023 9:38 AM
22	5/26/2023 1:30 AM
23	5/25/2023 9:03 PM
24	5/25/2023 12:41 PM
25	5/25/2023 11:44 AM
26	5/25/2023 10:53 AM
27	5/25/2023 8:34 AM
28	5/24/2023 10:40 PM
29	5/24/2023 7:50 PM
30	5/24/2023 6:45 PM
31	5/24/2023 12:21 PM
32	5/24/2023 6:01 AM
33	5/23/2023 9:12 PM
34	5/23/2023 7:02 PM
35	5/23/2023 5:19 AM
36	5/22/2023 10:05 PM
37	5/22/2023 8:53 PM
38	5/22/2023 6:20 PM
39	5/22/2023 3:10 PM
40	5/21/2023 2:05 PM
41	5/21/2023 1:59 PM
42	5/21/2023 1:07 AM
43	5/20/2023 7:55 PM
44	5/19/2023 5:15 PM
45	5/19/2023 2:52 PM
46	5/19/2023 2:32 PM
47	5/19/2023 10:20 AM
48	5/19/2023 8:04 AM
49	5/19/2023 7:31 AM
50	5/19/2023 12:00 AM
51	5/18/2023 10:41 PM
52	5/18/2023 4:24 PM
53	5/18/2023 3:19 PM
54	5/18/2023 2:49 PM

55	5/18/2023 1:20 PM
56	5/18/2023 11:41 AM
57	5/18/2023 6:58 AM
58	5/18/2023 5:54 AM
59	5/18/2023 12:55 AM
60	5/17/2023 11:07 PM
61	5/17/2023 9:16 PM
62	5/17/2023 9:16 PM
63	5/17/2023 9:10 PM
64	5/17/2023 7:43 PM
65	5/17/2023 7:36 PM
66	5/17/2023 7:12 PM
67	5/17/2023 3:43 PM
68	5/17/2023 3:00 PM
69	5/17/2023 2:11 PM
70	5/17/2023 12:30 PM
71	5/17/2023 9:30 AM
72	5/17/2023 8:08 AM
73	5/17/2023 8:01 AM
74	5/17/2023 7:44 AM
75	5/17/2023 6:39 AM
76	5/17/2023 5:47 AM
77	5/17/2023 5:40 AM
78	5/17/2023 3:11 AM
79	5/16/2023 9:13 PM
80	5/16/2023 9:00 PM
81	5/16/2023 8:20 PM
82	5/16/2023 6:42 PM
83	5/16/2023 6:16 PM
84	5/16/2023 5:35 PM
85	5/16/2023 5:00 PM
86	5/16/2023 4:55 PM
87	5/16/2023 4:00 PM
88	5/16/2023 3:47 PM
89	5/16/2023 3:45 PM
90	5/16/2023 3:04 PM
91	5/16/2023 2:34 PM
92	5/16/2023 2:23 PM

93	5/16/2023 2:21 PM
94	5/16/2023 2:14 PM
95	5/16/2023 1:25 PM
96	5/16/2023 12:24 PM
97	5/16/2023 11:31 AM
98	5/16/2023 11:10 AM
99	5/16/2023 10:43 AM
100	5/16/2023 9:21 AM
101	5/16/2023 9:05 AM
102	5/16/2023 8:19 AM
103	5/16/2023 8:09 AM
104	5/16/2023 7:36 AM
105	5/16/2023 7:01 AM
106	5/16/2023 6:11 AM
107	5/16/2023 5:48 AM
108	5/16/2023 12:54 AM
109	5/16/2023 12:12 AM
110	5/16/2023 12:05 AM
111	5/15/2023 11:01 PM
112	5/15/2023 10:44 PM
113	5/15/2023 10:41 PM
114	5/14/2023 4:58 AM
115	5/12/2023 10:44 AM
116	5/12/2023 7:59 AM
117	5/12/2023 7:40 AM
118	5/10/2023 5:46 PM
119	5/9/2023 8:16 PM
120	5/9/2023 2:26 PM
121	5/9/2023 10:47 AM
122	5/9/2023 10:19 AM
123	5/9/2023 10:18 AM
124	5/9/2023 8:58 AM
125	5/9/2023 8:02 AM
126	5/9/2023 7:53 AM
127	5/9/2023 6:28 AM
128	5/8/2023 10:22 AM
129	5/5/2023 3:49 PM
130	5/4/2023 6:08 PM

131		5/4/2023 5:10 PM
132		5/3/2023 9:42 PM
133		5/3/2023 4:57 PM
134		5/3/2023 4:05 PM
135		5/3/2023 10:47 AM
136		5/3/2023 9:33 AM
137		5/3/2023 8:37 AM
138		5/2/2023 8:48 PM
#		DATE
1		6/1/2023 8:25 AM
2		5/30/2023 6:54 PM
3		5/30/2023 3:36 PM
4		5/27/2023 4:20 AM
5		5/26/2023 11:33 PM
6		5/26/2023 9:38 AM
7		5/24/2023 12:21 PM
8		5/24/2023 6:01 AM
9		5/22/2023 10:05 PM
10		5/18/2023 10:41 PM
11		5/18/2023 5:13 PM
12		5/17/2023 9:16 PM
13		5/17/2023 2:11 PM
14		5/17/2023 8:01 AM
15		5/17/2023 7:44 AM
16		5/17/2023 5:40 AM
17		5/16/2023 3:47 PM
18		5/16/2023 2:21 PM
19		5/16/2023 12:24 PM
20		5/16/2023 12:12 AM
21		5/12/2023 10:44 AM
22		5/12/2023 7:59 AM
23		5/9/2023 10:18 AM
24		5/9/2023 8:02 AM
25		5/9/2023 7:53 AM
26		5/8/2023 10:22 AM
27		5/3/2023 9:42 PM
28		5/2/2023 8:48 PM
#	CITY/TOWN	DATE

1	Manti	6/5/2023 3:43 PM
2	Fayette	6/3/2023 3:40 PM
3	Delta	6/1/2023 8:25 AM
4	Salina	5/31/2023 9:47 AM
5	Richfield	5/31/2023 12:24 AM
6	Salina utah	5/30/2023 6:54 PM
7	Manti	5/30/2023 3:36 PM
8	Mt Pleasant	5/30/2023 2:54 PM
9	Kanosh	5/29/2023 3:14 PM
10	Torrey	5/29/2023 1:16 PM
11	Austin	5/29/2023 10:46 AM
12	Loa	5/29/2023 9:43 AM
13	Mona	5/29/2023 6:58 AM
14	Richfield	5/28/2023 10:13 AM
15	Elberta	5/27/2023 11:39 AM
16	Deseret	5/27/2023 10:59 AM
17	Eureka	5/27/2023 7:20 AM
18	new york	5/27/2023 4:20 AM
19	Orem	5/26/2023 11:33 PM
20	Elsinore	5/26/2023 8:52 PM
21	Delta	5/26/2023 9:38 AM
22	Richfield	5/26/2023 1:30 AM
23	Monroe	5/25/2023 9:03 PM
24	Fillmore	5/25/2023 12:41 PM
25	fairview	5/25/2023 11:44 AM
26	Richfield	5/25/2023 10:53 AM
27	Elsinore	5/25/2023 8:34 AM
28	Wales	5/24/2023 10:40 PM
29	Ephraim	5/24/2023 7:50 PM
30	Marysvale	5/24/2023 12:21 PM
31	Junction	5/24/2023 6:01 AM
32	Centerfield	5/23/2023 9:12 PM
33	Salina	5/23/2023 7:02 PM
34	Nephi	5/23/2023 5:19 AM
35	Sigurd	5/22/2023 10:05 PM
36	Centerfield	5/22/2023 8:53 PM
37	Scipio	5/22/2023 6:20 PM
38	Monroe	5/22/2023 3:10 PM

39	Richfield	5/21/2023 2:05 PM
40	Delta	5/21/2023 1:59 PM
41	Mt Pleasant	5/21/2023 1:07 AM
42	Glenwood	5/20/2023 7:55 PM
43	Richfield	5/19/2023 5:15 PM
44	Nephi	5/19/2023 2:52 PM
45	Delta	5/19/2023 2:32 PM
46	Manti	5/19/2023 10:20 AM
47	Fillmore	5/19/2023 8:04 AM
48	Fairview	5/19/2023 7:31 AM
49	Richfield	5/19/2023 12:00 AM
50	Fountain Green	5/18/2023 10:41 PM
51	Flowell	5/18/2023 4:24 PM
52	Richfield	5/18/2023 3:19 PM
53	Manti	5/18/2023 2:49 PM
54	Fairview	5/18/2023 1:20 PM
55	Annabella	5/18/2023 11:41 AM
56	Elsinore	5/18/2023 6:58 AM
57	centerfield	5/18/2023 5:54 AM
58	Fayette	5/18/2023 12:55 AM
59	Mayfield	5/17/2023 11:07 PM
60	Richfield	5/17/2023 9:16 PM
61	Sterling	5/17/2023 9:16 PM
62	Hinckley	5/17/2023 9:10 PM
63	Monroe	5/17/2023 7:43 PM
64	Elsinore	5/17/2023 7:36 PM
65	Delta	5/17/2023 7:12 PM
66	Richfield	5/17/2023 3:43 PM
67	Delta	5/17/2023 3:00 PM
68	Fayette	5/17/2023 2:11 PM
69	Richfield	5/17/2023 12:30 PM
70	richfield	5/17/2023 9:30 AM
71	Delta	5/17/2023 8:08 AM
72	Fillmore	5/17/2023 8:01 AM
73	Meadow	5/17/2023 7:44 AM
74	Salina	5/17/2023 6:39 AM
75	Mt pleasant	5/17/2023 5:47 AM
76	Centerfield, Utah	5/17/2023 5:40 AM
77	Richfield	5/17/2023 3:11 AM
-----	--------------------	--------------------
78	Delta	5/16/2023 9:13 PM
79	Delta	5/16/2023 9:00 PM
80	Marysvale	5/16/2023 8:20 PM
81	Marysvale	5/16/2023 6:42 PM
82	Marysvale	5/16/2023 6:16 PM
83	Joseph	5/16/2023 5:35 PM
84	Glenwood	5/16/2023 5:00 PM
85	Monroe	5/16/2023 4:55 PM
86	Ephraim	5/16/2023 4:00 PM
87	Fayette	5/16/2023 3:47 PM
88	Centerfield	5/16/2023 3:45 PM
89	SALINA	5/16/2023 3:04 PM
90	Moroni	5/16/2023 2:34 PM
91	Fayette	5/16/2023 2:23 PM
92	Moroni	5/16/2023 2:21 PM
93	Joseph	5/16/2023 2:14 PM
94	Ephraim utah	5/16/2023 1:25 PM
95	Richfield	5/16/2023 12:24 PM
96	Lynndyl	5/16/2023 11:31 AM
97	Meadow	5/16/2023 11:10 AM
98	Fayette	5/16/2023 10:43 AM
99	Marysvale	5/16/2023 9:21 AM
100	Richfield	5/16/2023 9:05 AM
101	Grover	5/16/2023 8:19 AM
102	Marysvale	5/16/2023 8:09 AM
103	Centerfield	5/16/2023 7:36 AM
104	Circleville	5/16/2023 7:01 AM
105	Spring City	5/16/2023 6:11 AM
106	Fayette	5/16/2023 5:48 AM
107	Fillmore (flowell)	5/16/2023 12:54 AM
108	Greenwich	5/16/2023 12:12 AM
109	Richfield	5/16/2023 12:05 AM
110	Centerfield	5/15/2023 11:01 PM
111	Mona	5/15/2023 10:44 PM
112	Fillmore	5/15/2023 10:41 PM
113	Monroe	5/14/2023 4:58 AM
114	Axtell	5/12/2023 10:44 AM

115	Delta	5/12/2023 7:59 AM
116	Centerfield	5/12/2023 7:40 AM
117	Spring City	5/10/2023 5:46 PM
118	Spring City	5/9/2023 8:16 PM
119	Bicknell	5/9/2023 2:26 PM
120	Spring City	5/9/2023 10:47 AM
121	Spring City	5/9/2023 10:19 AM
122	SPRING CITY	5/9/2023 10:18 AM
123	Spring City	5/9/2023 8:58 AM
124	SPRING CITY	5/9/2023 8:02 AM
125	Spring City	5/9/2023 7:53 AM
126	Spring City	5/9/2023 6:28 AM
127	Torrey	5/8/2023 10:22 AM
128	Hinckley	5/5/2023 3:49 PM
129	Hinckley	5/4/2023 6:08 PM
130	Delta	5/4/2023 5:10 PM
131	Hinckley	5/3/2023 9:42 PM
132	Hinckley	5/3/2023 4:57 PM
133	Bicknell	5/3/2023 4:05 PM
134	Joseph	5/3/2023 10:47 AM
135	Joseph	5/3/2023 9:33 AM
136	Fayette	5/3/2023 8:37 AM
137	Fountain Green	5/2/2023 8:48 PM
#	STATE/PROVINCE	DATE
	There are no responses.	
#	ZIP/POSTAL CODE	DATE
1	84642-1415	6/5/2023 3:43 PM
2	84630	6/3/2023 3:40 PM
3	84624	6/1/2023 8:25 AM
4	84654	5/31/2023 9:47 AM
5	84701	5/31/2023 12:24 AM
6	84654	5/30/2023 6:54 PM
7	84642	5/30/2023 3:36 PM
8	84647	5/30/2023 2:54 PM
9	Ut	5/29/2023 3:14 PM
10	84775	5/29/2023 1:16 PM
11	85754	5/29/2023 10:46 AM
12	84747	5/29/2023 9:43 AM

13	84645	5/29/2023 6:58 AM
14	Utah	5/28/2023 10:13 AM
15	84626	5/27/2023 11:39 AM
16	84624	5/27/2023 10:59 AM
17	84628	5/27/2023 7:20 AM
18	10008	5/27/2023 4:20 AM
19	84097	5/26/2023 11:33 PM
20	84724	5/26/2023 8:52 PM
21	84624	5/26/2023 9:38 AM
22	84701	5/26/2023 1:30 AM
23	84754	5/25/2023 9:03 PM
24	84631	5/25/2023 12:41 PM
25	84629	5/25/2023 11:44 AM
26	84701	5/25/2023 10:53 AM
27	84724	5/25/2023 8:34 AM
28	84667	5/24/2023 10:40 PM
29	84627	5/24/2023 7:50 PM
30	84620	5/24/2023 6:45 PM
31	84750	5/24/2023 12:21 PM
32	84740	5/24/2023 6:01 AM
33	84622	5/23/2023 9:12 PM
34	84654	5/23/2023 7:02 PM
35	84648	5/23/2023 5:19 AM
36	84657	5/22/2023 10:05 PM
37	84622	5/22/2023 8:53 PM
38	84656	5/22/2023 6:20 PM
39	84754	5/22/2023 3:10 PM
40	84701	5/21/2023 2:05 PM
41	84624	5/21/2023 1:59 PM
42	84654	5/21/2023 12:28 PM
43	84647	5/21/2023 1:07 AM
44	84730	5/20/2023 7:55 PM
45	84701	5/19/2023 5:15 PM
46	84648	5/19/2023 2:52 PM
47	84624	5/19/2023 2:32 PM
48	84642	5/19/2023 10:20 AM
49	84631	5/19/2023 8:04 AM
50	84629	5/19/2023 7:31 AM

51	84701	5/19/2023 12:00 AM
52	84632	5/18/2023 10:41 PM
53	84631	5/18/2023 4:24 PM
54	84701	5/18/2023 3:19 PM
55	84642	5/18/2023 2:49 PM
56	84629	5/18/2023 1:20 PM
57	84711	5/18/2023 11:41 AM
58	84724	5/18/2023 6:58 AM
59	84622	5/18/2023 5:54 AM
60	83630	5/18/2023 12:55 AM
61	84643	5/17/2023 11:07 PM
62	84701	5/17/2023 9:16 PM
63	84665	5/17/2023 9:16 PM
64	84635	5/17/2023 9:10 PM
65	84754	5/17/2023 7:43 PM
66	84724	5/17/2023 7:36 PM
67	84624	5/17/2023 7:12 PM
68	84701	5/17/2023 3:43 PM
69	84624	5/17/2023 3:00 PM
70	84630	5/17/2023 2:11 PM
71	84701	5/17/2023 12:30 PM
72	84701	5/17/2023 9:30 AM
73	84624	5/17/2023 8:08 AM
74	84631	5/17/2023 8:01 AM
75	84644	5/17/2023 7:44 AM
76	84654	5/17/2023 6:39 AM
77	84647	5/17/2023 5:47 AM
78	84622	5/17/2023 5:40 AM
79	84701	5/17/2023 3:11 AM
80	84624	5/16/2023 9:13 PM
81	84624	5/16/2023 9:00 PM
82	84750	5/16/2023 8:20 PM
83	84750	5/16/2023 6:42 PM
84	84750	5/16/2023 6:16 PM
85	83739	5/16/2023 5:35 PM
86	84730	5/16/2023 5:00 PM
87	84754	5/16/2023 4:55 PM
88	84627	5/16/2023 4:00 PM

89	84630	5/16/2023 3:47 PM
90	84622	5/16/2023 3:45 PM
91	84654	5/16/2023 3:04 PM
92	84646	5/16/2023 2:34 PM
93	84630	5/16/2023 2:23 PM
94	84646	5/16/2023 2:21 PM
95	83739	5/16/2023 2:14 PM
96	84627	5/16/2023 1:25 PM
97	84701	5/16/2023 12:24 PM
98	84640	5/16/2023 11:31 AM
99	84644	5/16/2023 11:10 AM
100	84630	5/16/2023 10:43 AM
101	84750	5/16/2023 9:21 AM
102	84701	5/16/2023 9:05 AM
103	84773	5/16/2023 8:19 AM
104	84750	5/16/2023 8:09 AM
105	84622	5/16/2023 7:36 AM
106	84723	5/16/2023 7:01 AM
107	84662	5/16/2023 6:11 AM
108	84630	5/16/2023 5:48 AM
109	84631	5/16/2023 12:54 AM
110	84732	5/16/2023 12:12 AM
111	84701/2949	5/16/2023 12:05 AM
112	84622	5/15/2023 11:01 PM
113	84645	5/15/2023 10:44 PM
114	84631	5/15/2023 10:41 PM
115	84754	5/14/2023 4:58 AM
116	84621	5/12/2023 10:44 AM
117	84624	5/12/2023 7:59 AM
118	84622	5/12/2023 7:40 AM
119	84662	5/10/2023 5:46 PM
120	84662	5/9/2023 8:16 PM
121	84715	5/9/2023 2:26 PM
122	84662	5/9/2023 10:47 AM
123	84662	5/9/2023 10:19 AM
124	84662	5/9/2023 10:18 AM
125		
	84662	5/9/2023 8:58 AM

127	84662	5/9/2023 7:53 AM
128	84662	5/9/2023 6:28 AM
129	84775	5/8/2023 10:22 AM
130	84635	5/5/2023 3:49 PM
131	84635	5/4/2023 6:08 PM
132	84624	5/4/2023 5:10 PM
133	84635	5/3/2023 9:42 PM
134	84635	5/3/2023 4:57 PM
135	84715	5/3/2023 4:05 PM
136	84739	5/3/2023 10:47 AM
137	84739	5/3/2023 9:33 AM
138	84630	5/3/2023 8:37 AM
139	84632	5/2/2023 8:48 PM
#	COUNTRY	DATE
	There are no responses.	
#	EMAIL ADDRESS	DATE
	There are no responses.	
#	PHONE NUMBER	DATE
	There are no responses.	



Q2 Do you r	ent or own	this pro	perty?
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ANSWER CHOICES	RESPONSES	
Rent	15.22%	21
Own	84.78%	117
TOTAL		138



Q3 Do you have an internet connection at your residence?

ANSWER CHOICES	RESPONSES	
Yes, I have an internet connection at my residence.	92.20%	130
No, I don't have an internet connection at my residence.	7.80%	11
TOTAL		141

Q4 What kind of internet connection do you have? (Select all that apply)



ANSWER CHOICES		RESI	PONSES	
Cable or digi	tal subscriber line (DSL- telephone line)	40.00	0%	46
Wireless		35.65	5%	41
Fiber optics		14.78	3%	17
Satellite or mobile		15.65	5%	18
I do not know		7.83%	6	9
Other (please specify)		0.87%	6	1
Total Respondents: 115				
#	OTHER (PLEASE SPECIFY)		DATE	
1	dhemm be bad no je		5/18/2023 5:13 PM	

Q5 What speed is your internet service (download speed)? (Megabits per second = Mbps)



ANSWER CHOICES	RESPONSES	
10 Mbps or less	14.78%	17
Up to 25 Mbps	28.70%	33
Up to 100 Mbps	31.30%	36
Up to 1 Gigabit	6.96%	8
I do not know (you can test your internet speed at speedtest.utah.gov)	18.26%	21
TOTAL		115

Q6 Which company do you use for internet? (E.g., Utopia, CenturyLink, Xfinity, Rise Broadband, Liberty Broadband, Beehive Broadband, etc.)

Answered: 116 Skipped: 26

#	RESPONSES	DATE
1	Manti Telephone	6/5/2023 3:46 PM
2	CenturyLink	6/3/2023 3:42 PM
3	Centracom	6/1/2023 8:28 AM
4	Centracom	5/31/2023 9:51 AM
5	Infowest	5/30/2023 5:29 PM
6	Fuller broadband	5/29/2023 3:15 PM
7	Starlink	5/29/2023 1:17 PM
8	South Central	5/29/2023 9:45 AM
9	Centracom	5/29/2023 6:58 AM
10	Centracom	5/28/2023 10:15 AM
11	Centracom	5/27/2023 11:41 AM
12	Frontier Communications	5/27/2023 11:01 AM
13	T mobile	5/27/2023 7:31 AM
14	erttwtb e rterwt rt	5/27/2023 4:20 AM
15	T-Mobile	5/26/2023 8:54 PM
16	Centracom	5/25/2023 9:05 PM
17	Frontir	5/25/2023 12:48 PM
18	centracom	5/25/2023 11:46 AM
19	Starlink	5/24/2023 10:42 PM
20	Centracom	5/24/2023 7:52 PM
21	Centracom	5/24/2023 6:46 PM
22	South Central	5/24/2023 12:22 PM
23	Century Link	5/23/2023 9:14 PM
24	Centracom	5/23/2023 7:04 PM
25	Centracom	5/23/2023 5:21 AM
26	Info West	5/22/2023 10:08 PM
27	Centracom	5/22/2023 6:25 PM
28	Century link	5/22/2023 3:17 PM
29	InfoWest	5/21/2023 2:06 PM
30	Commercial Business Radio.	5/21/2023 2:01 PM
31	CentraCom	5/21/2023 1:09 AM

32	Crentrs com	5/20/2023 7:57 PM
33	CenturyLink	5/19/2023 2:52 PM
34	Frontier	5/19/2023 2:37 PM
35	Central Com	5/19/2023 10:23 AM
36	Fuller Broadband	5/19/2023 8:06 AM
37	Centracom	5/19/2023 7:37 AM
38	CentraCom	5/19/2023 12:01 AM
39	CentraCom	5/18/2023 10:43 PM
40	jejenenj	5/18/2023 5:13 PM
41	Fuller Broadband	5/18/2023 4:25 PM
42	Infowest	5/18/2023 3:27 PM
43	Manti telecom	5/18/2023 2:50 PM
44	Centra.com	5/18/2023 1:24 PM
45	Info west	5/18/2023 11:46 AM
46	Centracom	5/18/2023 7:00 AM
47	centra com	5/18/2023 5:55 AM
48	Starlink	5/18/2023 12:58 AM
49	Centracom	5/17/2023 11:11 PM
50	Centracom	5/17/2023 9:18 PM
51	Centracom	5/17/2023 9:13 PM
52	InfoWest	5/17/2023 7:49 PM
53	Hughes Net	5/17/2023 7:42 PM
54	Frontier	5/17/2023 7:13 PM
55	Centra Com	5/17/2023 3:45 PM
56	Vortex	5/17/2023 3:20 PM
57	Gunnison telephone	5/17/2023 2:12 PM
58	Centracom	5/17/2023 9:32 AM
59	Centrcom	5/17/2023 8:10 AM
60	Hughes	5/17/2023 7:46 AM
61	T mobile	5/17/2023 6:39 AM
62	Centracom	5/17/2023 5:50 AM
63	Gunnison	5/17/2023 5:41 AM
64	Frontier	5/16/2023 9:17 PM
65	CentraCom	5/16/2023 9:06 PM
66	Starlink	5/16/2023 8:21 PM
67	South Central	5/16/2023 6:45 PM
68	Info West	5/16/2023 6:17 PM
69	Infowest	5/16/2023 5:37 PM

70	CenturyLink	5/16/2023 5:07 PM
71	Gunnison Telephone	5/16/2023 3:48 PM
72	CentraCom	5/16/2023 3:47 PM
73	centurylink	5/16/2023 3:08 PM
74	Centra com	5/16/2023 2:35 PM
75	Centra com	5/16/2023 2:22 PM
76	CenturyLink	5/16/2023 2:18 PM
77	frontier	5/16/2023 2:04 PM
78	Manti telephone	5/16/2023 1:27 PM
79	centa com	5/16/2023 12:27 PM
80	Centracom	5/16/2023 11:32 AM
81	Fuller Internet	5/16/2023 11:12 AM
82	Lightburst Broadband	5/16/2023 10:45 AM
83	South Central	5/16/2023 9:23 AM
84	Centa com	5/16/2023 9:06 AM
85	South Central Communications	5/16/2023 8:27 AM
86	Centracom	5/16/2023 7:39 AM
87	South Central	5/16/2023 7:04 AM
88	CentraCom	5/16/2023 6:13 AM
89	GTELCO	5/16/2023 5:50 AM
90	Fuller broadband	5/16/2023 12:57 AM
91	sc communication	5/16/2023 12:16 AM
92	InfoWest	5/16/2023 12:07 AM
93	Centracom	5/15/2023 11:03 PM
94	CentroCom and T-Mobile	5/15/2023 10:45 PM
95	Centracom	5/14/2023 5:01 AM
96	Light burst Broadband	5/12/2023 10:47 AM
97	Centracom	5/12/2023 8:00 AM
98	Centracom	5/12/2023 7:42 AM
99	Centrecom	5/10/2023 5:47 PM
100	Manti Telephone Company	5/9/2023 8:48 PM
101	South Central	5/9/2023 2:28 PM
102	Manti Telecom	5/9/2023 10:47 AM
103	Centra Com	5/9/2023 10:27 AM
104	Manti Telephone	5/9/2023 9:01 AM
105	CentraCom	5/9/2023 8:07 AM
106	Centracom	5/9/2023 8:04 AM
107	South Central Communications	5/8/2023 10:23 AM

108	Centracom	5/5/2023 3:59 PM
109	Centracom	5/4/2023 6:09 PM
110	Frontier	5/4/2023 5:12 PM
111	Centracom	5/3/2023 9:44 PM
112	Frontier	5/3/2023 4:58 PM
113	SouthCentral Communications	5/3/2023 4:06 PM
114	Infowest	5/3/2023 10:56 AM
115	Comcast	5/3/2023 8:38 AM
116	CentraCom	5/2/2023 8:50 PM

Q7 What is the monthly charge for your internet service? Write "Unknown" if unknown.

Answered: 116 Skipped: 26

#	RESPONSES	DATE
1	\$90.00	6/5/2023 3:46 PM
2	Unknown	6/3/2023 3:42 PM
3	\$65.00	6/1/2023 8:28 AM
4	56.00	5/31/2023 9:51 AM
5	69.99	5/30/2023 5:29 PM
6	40.00	5/29/2023 3:15 PM
7	\$145	5/29/2023 1:17 PM
8	\$90.00	5/29/2023 9:45 AM
9	56	5/29/2023 6:58 AM
10	90.00	5/28/2023 10:15 AM
11	85.00	5/27/2023 11:41 AM
12	Unknown	5/27/2023 11:01 AM
13	\$50	5/27/2023 7:31 AM
14	ertwetert	5/27/2023 4:20 AM
15	50	5/26/2023 8:54 PM
16	69.00	5/25/2023 9:05 PM
17	135	5/25/2023 12:48 PM
18	50	5/25/2023 11:46 AM
19	110	5/24/2023 10:42 PM
20	70	5/24/2023 7:52 PM
21	Unknown	5/24/2023 6:46 PM
22	89.50	5/24/2023 12:22 PM
23	\$120	5/23/2023 9:14 PM
24	About 45	5/23/2023 7:04 PM
25	\$167	5/23/2023 5:21 AM
26	75	5/22/2023 10:08 PM
27	47.00	5/22/2023 6:25 PM
28	Unsure	5/22/2023 3:17 PM
29	59.95	5/21/2023 2:06 PM
30	\$54	5/21/2023 2:01 PM
31	about 80 I think	5/21/2023 1:09 AM

32	40	5/20/2023 7:57 PM
33	75	5/19/2023 2:52 PM
34	69.99	5/19/2023 2:37 PM
35	\$35.95	5/19/2023 10:23 AM
36	\$40	5/19/2023 8:06 AM
37	40	5/19/2023 7:37 AM
38	Unknown	5/19/2023 12:01 AM
39	\$139	5/18/2023 10:43 PM
40	nrnendnbrbrkne enven	5/18/2023 5:13 PM
41	45	5/18/2023 4:25 PM
42	\$45.00	5/18/2023 3:27 PM
43	\$70	5/18/2023 2:50 PM
44	\$39	5/18/2023 1:24 PM
45	60	5/18/2023 11:46 AM
46	47.00	5/18/2023 7:00 AM
47	80.00	5/18/2023 5:55 AM
48	110	5/18/2023 12:58 AM
49	79	5/17/2023 11:11 PM
50	35.95	5/17/2023 9:18 PM
51	70	5/17/2023 9:13 PM
52	\$70	5/17/2023 7:49 PM
53	45	5/17/2023 7:42 PM
54	45	5/17/2023 7:13 PM
55	\$86	5/17/2023 3:45 PM
56	59	5/17/2023 3:20 PM
57	52	5/17/2023 2:12 PM
58	\$49	5/17/2023 9:32 AM
59	7100	5/17/2023 8:10 AM
60	40	5/17/2023 7:46 AM
61	55	5/17/2023 6:39 AM
62	83.67	5/17/2023 5:50 AM
63	Unknown	5/17/2023 5:41 AM
64	\$150 with phone	5/16/2023 9:17 PM
65	68.00	5/16/2023 9:06 PM
66	\$110	5/16/2023 8:21 PM
67	89.00	5/16/2023 6:45 PM
68	69.00	5/16/2023 6:17 PM
69	50.00	5/16/2023 5:37 PM

70	Unknown. Internet and phone are lumped together.	5/16/2023 5:07 PM
71	80	5/16/2023 3:48 PM
72	\$70	5/16/2023 3:47 PM
73	60.00	5/16/2023 3:08 PM
74	130	5/16/2023 2:35 PM
75	75.00	5/16/2023 2:22 PM
76	75.65	5/16/2023 2:18 PM
77	135	5/16/2023 2:04 PM
78	39.95	5/16/2023 1:27 PM
79	unknown	5/16/2023 12:27 PM
80	45	5/16/2023 11:32 AM
81	80.09	5/16/2023 11:12 AM
82	\$52	5/16/2023 10:45 AM
83	\$89.00	5/16/2023 9:23 AM
84	70.	5/16/2023 9:06 AM
85	\$4.95	5/16/2023 8:27 AM
86	62.00	5/16/2023 7:39 AM
87	85.98	5/16/2023 7:04 AM
88	\$70	5/16/2023 6:13 AM
89	75	5/16/2023 5:50 AM
90	\$40	5/16/2023 12:57 AM
91	unknown to much	5/16/2023 12:16 AM
92	\$50	5/16/2023 12:07 AM
93	86.00	5/15/2023 11:03 PM
94	85	5/15/2023 10:45 PM
95	\$46 (I have to "rent" my modem forever, apparently?	5/14/2023 5:01 AM
96	\$39	5/12/2023 10:47 AM
97	\$50	5/12/2023 8:00 AM
98	\$50	5/12/2023 7:42 AM
99	75.00	5/10/2023 5:47 PM
100	69.95	5/9/2023 8:48 PM
101	\$56	5/9/2023 2:28 PM
102	\$80	5/9/2023 10:47 AM
103	\$39.95	5/9/2023 10:27 AM
104	75	5/9/2023 9:01 AM
105	\$44.90	5/9/2023 8:07 AM
106	35	5/9/2023 8:04 AM
107	92.00	5/8/2023 10:23 AM

108	35.95	5/5/2023 3:59 PM
109	\$80	5/4/2023 6:09 PM
110	60.00	5/4/2023 5:12 PM
111	\$150	5/3/2023 9:44 PM
112	\$85	5/3/2023 4:58 PM
113	\$88	5/3/2023 4:06 PM
114	44.95	5/3/2023 10:56 AM
115	unknown	5/3/2023 8:38 AM
116	70.00	5/2/2023 8:50 PM

Q8 Does your internet bill include other services such as phone, TV, or premium content?



ANSWER CHOICES	RESPONSES	
Yes	18.97%	22
No	81.03%	94
TOTAL	1	116



Q9 What do you use the internet for? Select all that apply.

ANSWER CHOICES	RESPONSES	
Remote working	46.55%	54
Remote learning	47.41%	55
Remote health care/telehealth	48.28%	56
Video conferencing/chatting	58.62%	68
Entertainment/streaming services	89.66%	104
Shopping	81.90%	95
Gaming	37.93%	44
Other (please specify)	9.48%	11
Total Respondents: 116		

#	OTHER (PLEASE SPECIFY)	DATE
1	YouTube	6/5/2023 3:46 PM
2	tv	5/25/2023 11:46 AM
3	Social networks, and email	5/18/2023 3:27 PM
4	Research, phone	5/17/2023 11:11 PM

5	Mail, banking, news	5/17/2023 7:13 PM
6	Reading, financial, misc.	5/16/2023 9:06 PM
7	Email, connecting with family, gospel study, indexing	5/16/2023 5:07 PM
8	Home security and smart home	5/16/2023 2:18 PM
9	Best service I've ever had	5/16/2023 12:57 AM
10	POP. Cellular phone	5/16/2023 12:07 AM
11	Photo editing	5/15/2023 11:03 PM

Q10 Can you provide more details about what is preventing you from accessing the internet at your household? Select all that apply.



ANSWER C	HOICES		RESPONSES	
Initial connec	ction fees are too expensive		60.00%	6
Monthly cha	ges are too expensive		80.00%	8
I do not have	e a computer or tablet to use		20.00%	2
I do not knov	v how to use a computer or tablet		10.00%	1
I do not knov	v how to get internet service		10.00%	1
I do not need	I it/am not interested in it		0.00%	0
I have physical limitations		10.00%	1	
I am worried about privacy and others getting my information		10.00%	1	
An internet connection isn't available in my area		10.00%	1	
I access the internet at a public internet source, such as a library or a community center		10.00%	1	
Other (please specify)		20.00%	2	
Total Respondents: 10				
#	OTHER (PLEASE SPECIFY)	DAT	E	
1	When I checked on getting service it was either not available or guaranteed to be slow and poor connection because we would be at the end of the line.	5/15	5/2023 10:45 PM	
2	For now I use my phone, but it is very slow and unreliable	5/9/	2023 10:21 AM	

Q11 How much would you pay for internet per month if it was accessible to you at your residence?



ANSWER C	HOICES	AVERAGE NUMBER		TOTAL NUMBER		RESPONSES	
			43		429		10
Total Respo	ndents: 10						
#						DATE	
1	30					5/31/2023 12:27 AM	
2	60					5/30/2023 3:38 PM	
3	31					5/30/2023 2:56 PM	
4	37					5/26/2023 9:41 AM	
5	50					5/25/2023 10:56 AM	
6	0					5/17/2023 12:31 PM	
7	51					5/16/2023 8:10 AM	
8	50					5/15/2023 10:45 PM	
9	75					5/9/2023 10:21 AM	
10	45					5/3/2023 9:36 AM	

Q12 If you are willing, please share how a high-speed internet connection would improve your quality of life.

Answered: 8 Skipped: 134

#	RESPONSES	DATE
1	I would be able to use my email, catch up with family and friends. Work, if I choose to work from home. Be able to access to movie channels Use for cameras	5/31/2023 12:27 AM
2	If I had internet connection than I could stay home and not have to go and use the library. It would make it more simpler	5/30/2023 3:38 PM
3	Not so isolated. Access to information	5/30/2023 2:56 PM
4	If I can protect myinfo I would use it	5/26/2023 9:41 AM
5	Job search, bill pay, education, health care.	5/25/2023 10:56 AM
6	I could work from home	5/16/2023 8:10 AM
7	Allow the possibility of working from home.	5/15/2023 10:45 PM
8	I could work from home, I could attend zoom meetings, I could stream movies.	5/9/2023 10:21 AM

Q13 Do you have a tablet device you can use to access the internet at home?



ANSWER CHOICES	RESPONSES
Yes	78.33% 94
No	21.67% 26
I don't know	0.00%
TOTAL	120

Q14 Do you have a desktop or laptop computer you can use to access the internet at home?



ANSWER CHOICES	RESPONSES
Yes	91.67% 110
No	8.33% 10
I don't know	0.00% 0
TOTAL	120

Q15 Are you aware of the Affordable Connectivity Program, which provides a \$30 monthly discount for internet to low-income households?



ANSWER CHOICES		RESPONSES	
Yes, I participate in the Program.	4.20%	5	
Yes, I am aware of the Program, but do not participate in it or am not eligible.	36.13%	43	
No, but I would like information to learn if my household qualifies. (Please visit business.utah.gov)	33.61%	40	
No, and I am not interested.	26.05%	31	
TOTAL		119	



Q16 Are you a business owner?

ANSWER CHOICES	RESPONSES	
Yes	25.00%	30
No	75.00%	90
TOTAL		120

Q17 Is your business located at your primary residence?



ANSWER CHOICES	RESPONSES	
Yes	80.00%	24
No	20.00%	6
TOTAL		30

Q18 What is your business address?

Answered: 3 Skipped: 139

ANSWER CHOICES	RESPONSES	
Name	0.00%	0
Company	100.00%	3
Address	100.00%	3
Address 2	0.00%	0
City/Town	100.00%	3
State/Province	0.00%	0
ZIP/Postal Code	100.00%	3
Country	0.00%	0
Email Address	0.00%	0
Phone Number	0.00%	0

		DATE
Ħ	NAME	DATE
	There are no responses.	
#	COMPANY	DATE
1		5/26/2023 8:55 PM
2		5/18/2023 1:00 AM
3		5/9/2023 10:48 AM
#	ADDRESS	DATE
1		5/26/2023 8:55 PM
2		5/18/2023 1:00 AM
3		5/9/2023 10:48 AM
#	ADDRESS 2	DATE
	There are no responses.	
#	CITY/TOWN	DATE
1		5/26/2023 8:55 PM
2		5/18/2023 1:00 AM
3		5/9/2023 10:48 AM
#	STATE/PROVINCE	DATE
	There are no responses.	
#	ZIP/POSTAL CODE	DATE
1	84701	5/26/2023 8:55 PM
2	UT	5/18/2023 1:00 AM

3	84092	5/9/2023 10:48 AM
#	COUNTRY	DATE
	There are no responses.	
#	EMAIL ADDRESS	DATE
	There are no responses.	
#	PHONE NUMBER	DATE
	There are no responses.	



Q19 Do you have an	internet connection at	your business?
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ANSWER CHOICES	RESPONSES	
Yes, I have an internet connection at my business	71.43%	20
No, I don't have an internet connection at my business	28.57%	8
TOTAL		28

Q20 Which company do you use for business internet? (E.g., Utopia, CenturyLink, Xfinity, Rise Broadband, Liberty Broadband, Beehive Broadband, etc.)

Answered: 8 Skipped: 134

#	RESPONSES	DATE
1	Centracom	5/26/2023 8:56 PM
2	Centurylink	5/24/2023 6:49 PM
3	CentraCom	5/18/2023 10:45 PM
4	Gtelco	5/18/2023 1:02 AM
5	Huges Net	5/17/2023 7:45 PM
6	GTELCO	5/16/2023 5:52 AM
7	Centracom	5/15/2023 11:05 PM
8	Comcast	5/9/2023 10:49 AM

Q21 What type of internet connection does your business have?



ANSWER CHOICES		RESPONSES	
Cable or digital subscriber line (DSL- telephone line)		50.00%	4
Wireless		0.00%	0
Fiber optics		12.50%	1
Satellite or mobile		12.50%	1
I do not know		25.00%	2
Other (please specify)		0.00%	0
Total Respondents: 8			
#	OTHER (PLEASE SPECIFY)	DATE	

There are no responses.

Q22 What speed is your business internet service (download speed)? (Megabits per second = Mbps)



ANSWER CHOICES	RESPONSES	
10 Mbps or less	0.00%	0
Up to 25 Mbps	50.00%	4
Up to 100 Mbps	12.50%	1
Up to 1 Gigabit	25.00%	2
I do not know (you can test your internet speed at speedtest.utah.gov)	12.50%	1
TOTAL		8
Q23 What is the monthly charge for your business internet service? Write "Unknown" if unknown.

Answered: 8 Skipped: 134

#	RESPONSES	DATE
1	133	5/26/2023 8:56 PM
2	80.00	5/24/2023 6:49 PM
3	\$139	5/18/2023 10:45 PM
4	75?	5/18/2023 1:02 AM
5	45	5/17/2023 7:45 PM
6	75	5/16/2023 5:52 AM
7	86.00	5/15/2023 11:05 PM
8	\$55	5/9/2023 10:49 AM

Q24 Does your internet bill include other services such as phone, TV, or premium content?



ANSWER CHOICES	RESPONSES	
Yes	25.00%	2
No	75.00%	6
TOTAL		8

Q25 What do you typically use the internet for at your business? Select all that apply.



ANSWER CHOICES		RESPONSES	
Banking/onlin	e invoicing/payment processing/payroll	81.82%	9
Communicati	on (VoIP phone system, email)	72.73%	8
Off-site backup storage		36.36%	4
Office productivity (Video conferencing, Slack, Microsoft Teams)		81.82%	9
Cloud Storage		63.64%	7
Marketing/Social Media/Market Research		63.64%	7
Other (please specify)		27.27%	3
Total Respondents: 11			
#	OTHER (PLEASE SPECIFY)	DATE	
1	Dairy records	5/18/2023 1:02 AM	

2	MLS Access	5/17/2023 7:45 PM
3	Photography editing	5/15/2023 11:05 PM

Q26 Has the speed or reliability of your internet service affected your business?



ANSWER CHOICES	RESPONSES	
Yes	71.43%	10
No	28.57%	4
TOTAL		14

Q27 Please describe how internet reliability - or lack of internet connection - has affected your business.

Answered: 14 Skipped: 128

#	RESPONSES	DATE
1	Makes process slower	6/1/2023 8:30 AM
2	If Im having to run more than one app it doesnt work!!	5/28/2023 10:18 AM
3	it is rare to go down but without it we cannot do much work	5/26/2023 8:56 PM
4	Cannot use fax without internet disruptions at times	5/24/2023 6:49 PM
5	Slow connection speed, throttling when multiple users are connected. We have a large family and homeschool as well as running a business.	5/23/2023 9:18 PM
6	CentraCom charges double in 84632 than 13 miles away in Nephi. Same company, same speed. Immoral and unethical!	5/18/2023 10:45 PM
7	Slow net equals slow me!	5/17/2023 7:45 PM
8	Product I sell, the materials are typically not available locally. Use internet to purchase materials.	5/17/2023 9:33 AM
9	I have internet at my home but the signal does not reach my shop next door	5/17/2023 5:44 AM
10	I often have to make the choice between me working or letting the family get on and use the internet	5/16/2023 5:52 AM
11	Very poor service from frontier, slow connection,lofted out of service. Asked my son to bring his company here and help.us out, which he did.	5/16/2023 1:03 AM
12	Slow down or loss of connection	5/15/2023 11:05 PM
13	Connection at business is great - the residential needs help!	5/9/2023 10:49 AM
14	I use my phone, with limited bandwidth, or I have to go to a place with wifi and use a public connection	5/9/2023 10:23 AM

Q28 Tell us about internet access and how it relates to people within your community.



ANSWER CHOICES	RESPONSES	
Some people who want internet access have it.	12.50%	12
Some people want internet access but have no internet providers available.	1.04%	1
Some people want internet provider options than those that currently are available.	53.13%	51
Some people can't afford the internet option(s) available to them.	33.33%	32
Some people do not want the internet.	0.00%	0
TOTAL		96

Q29 What barriers make it difficult for individuals in your area to access the internet? (e.g., affordability, knowledge, infrastructure).

Answered: 92 Skipped: 50

	DECDONCEC	DATE
#	KESPUNSES	
1	Intrastructure	6/3/2023 3:45 PM
2	not always available in area. I had to wait 10 plus years. always had to use my mobile hotspot (expensive)	6/1/2023 8:34 AM
3	Mostly is the cost of the internet and it doesn't give you all that you need without paying higher prices. Most people are on a limited income	5/31/2023 12:31 AM
4	Equipment and cost. Centracom has issues every day	5/30/2023 5:34 PM
5	Well alot is the affordability it is alot for some and most people like us who are on limited incomes	5/30/2023 3:44 PM
6	Affordability	5/30/2023 3:00 PM
7	Knowledge	5/29/2023 3:18 PM
8	affordability is probably the major issue	5/29/2023 1:20 PM
9	Only 1 provider available in my area. There are only 2 in town	5/29/2023 7:01 AM
10	Monopolized providers	5/28/2023 10:35 AM
11	Affordable, providers, knowledgeable, accessible.	5/27/2023 11:50 AM
12	Infrastructure, low connectivity speeds	5/27/2023 11:07 AM
13	Affordability	5/27/2023 7:36 AM
14	infastructure	5/26/2023 8:58 PM
15	The knowledge and don't know how to get it free so they steal it so they don't spend there own money	5/26/2023 10:24 AM
16	I don't know	5/25/2023 9:08 PM
17	only option is centracom	5/25/2023 11:50 AM
18	Affordability	5/25/2023 11:00 AM
19	Infrastructure	5/24/2023 10:48 PM
20	Rural area	5/24/2023 12:27 PM
21	Infrastructure. We are very rural.	5/23/2023 9:24 PM
22	affordability	5/23/2023 7:08 PM
23	Affordability, infrastructure, many have unreliable Internet service	5/23/2023 5:28 AM
24	Affordability and availability	5/22/2023 10:20 PM
25	Low income area	5/22/2023 6:27 PM
26	Infrastructure - cable access is about a mile away.	5/21/2023 2:14 PM
27	Infrastructure	5/21/2023 2:08 PM
28	I assume high cost.	5/21/2023 1:12 AM
29	Cost	5/20/2023 8:00 PM

30	Infrastructure, affordability and they just don't know the options or opportunity available	5/19/2023 2:56 PM
31	Affordable.	5/19/2023 2:43 PM
32	Knowledge	5/19/2023 7:49 AM
33	AFFORDABILITY. CentraCom charges double to Nephi and double to Hurricane prices for same speed.	5/18/2023 10:50 PM
34	All of the above. Limited options, knowledge, how to, cost, etc	5/18/2023 4:28 PM
35	Affordability.	5/18/2023 3:37 PM
36	T-Mobile internet not available in Manti. Prices too high with other providers.	5/18/2023 2:53 PM
37	Cost	5/18/2023 7:04 AM
38	Affordability, options, intermittent service	5/18/2023 6:09 AM
39	Cost	5/18/2023 1:03 AM
40	Availability, cost, choice of providers	5/17/2023 11:19 PM
41	Infrastructure, affordability	5/17/2023 9:17 PM
42	Affordable choices	5/17/2023 7:48 PM
43	Infrastructure	5/17/2023 7:16 PM
44	Income	5/17/2023 4:03 PM
45	There's nothing available	5/17/2023 3:24 PM
46	Not knowing what's available and costs	5/17/2023 9:39 AM
47	Remote living. If you don't live in a city, access is limited to satellite options.	5/17/2023 8:04 AM
48	Affordability	5/17/2023 5:48 AM
49	Availability of high speed internet	5/16/2023 9:10 PM
50	Infrastructure, the only dsl provider has no reason to improve their basic 20 year old service	5/16/2023 8:29 PM
51	Infrastructure and affordability	5/16/2023 6:51 PM
52	Location	5/16/2023 6:21 PM
53	Small towns are always last	5/16/2023 5:41 PM
54	There's limited choice and it's costly	5/16/2023 3:52 PM
55	I don't know	5/16/2023 3:51 PM
56	THE COST	5/16/2023 3:15 PM
57	Affordability	5/16/2023 2:38 PM
58	We are out of town	5/16/2023 2:26 PM
59	Infrastructure	5/16/2023 2:23 PM
60	affordability	5/16/2023 12:30 PM
61	Infastructure and affordability	5/16/2023 11:18 AM
62	Only one option. No competition so price is higher than other areas with more options.	5/16/2023 10:49 AM
63	Affordability	5/16/2023 9:10 AM
64	Infrastructure	5/16/2023 8:31 AM
65	Affordability	5/16/2023 7:42 AM
66	Language, and don't qualify	5/16/2023 7:11 AM
67	Infrastructure, we are limited to only a few options	5/16/2023 5:56 AM

68	affordable infrastructure provider won't provide good internet 😒	5/16/2023 1:13 AM
69	Don't know about fuller broadband	5/16/2023 1:12 AM
70	Line of sight. No wire infostructure. No Fiber	5/16/2023 12:15 AM
71	Infrastructure	5/15/2023 11:08 PM
72	All 3.	5/14/2023 5:11 AM
73	Financial	5/12/2023 10:58 AM
74	Affordability	5/12/2023 8:04 AM
75	Infrastructure and availability. There aren't many options and the ones we have aren't very good	5/12/2023 7:47 AM
76	Affordability infrastructure	5/10/2023 5:51 PM
77	Price and infrastructure	5/9/2023 8:53 PM
78	Infrastructure	5/9/2023 2:30 PM
79	Infrastructure doesn't exist for high speed DSL, cable, or fiber to the residence.	5/9/2023 10:50 AM
80	There are no other options in our community for better service for internet here. My internet is the worst! It constantly lags. I would rate it as if it were equal to dial up from the 80's.	5/9/2023 10:32 AM
81	I signed up once, long ago, but it was expensive and the service was poor.	5/9/2023 10:26 AM
82	Affordability	5/9/2023 9:03 AM
83	Affordability and knowledge	5/9/2023 8:11 AM
84	knowledge	5/9/2023 8:09 AM
85	Affordability	5/8/2023 10:28 AM
86	Affordability, slow speed	5/4/2023 6:13 PM
87	Low wages, low bandwidth (5-12 mb down on average, 0.375mb to 1.2mb upload on average), lack of infrastructure and available isp options. Lack of DSL hubs/boosters for higher upload speeds/etc	5/4/2023 5:20 PM
88	Infrastructure	5/3/2023 5:01 PM
89	Affordability	5/3/2023 4:12 PM
90	Affordability	5/3/2023 9:42 AM
91	affordability, knowledge, infrastructure	5/3/2023 8:41 AM
92	Affordability, infrastructure	5/2/2023 8:54 PM

Q30 What would make it easier for individuals in your area to access the internet? (e.g., lower costs, subsidizing programs for internet service, educational programming for digital skills, infrastructure improvements).

Answered: 93 Skipped: 49

#	RESPONSES	DATE
1	Infrastructure improvements	6/3/2023 3:45 PM
2	Lower cost and availability	6/1/2023 8:34 AM
3	Lower costs I believe in the Salt Lake Valley there are some areas they get free goggle internet	5/31/2023 12:31 AM
4	Lower Cost. Infrastructure imporovments	5/30/2023 5:34 PM
5	Lower Costs and Subsidizing programs	5/30/2023 3:44 PM
6	Lower costs	5/30/2023 3:00 PM
7	Infrastructure improvements	5/29/2023 3:18 PM
8	subsidies would help	5/29/2023 1:20 PM
9	Infrastructure improvements and lower cost	5/29/2023 7:01 AM
10	Lower costs, better connectivety, infrastructure improvements	5/28/2023 10:35 AM
11	lower costs, improvement, infrastructure	5/27/2023 11:50 AM
12	Infrastructure and higher connection speeds	5/27/2023 11:07 AM
13	Lower cost, more options	5/27/2023 7:36 AM
14	infrastructure improvements	5/26/2023 8:58 PM
15	Not to have to spend your money on it when it is easier to steal it	5/26/2023 10:24 AM
16	Lower cost	5/25/2023 9:08 PM
17	a better low cost option	5/25/2023 11:50 AM
18	Lower monthly cost	5/25/2023 11:00 AM
19	Infrastructure to support, fiber, optic stable Internet	5/24/2023 10:48 PM
20	Infrastructure improvements	5/24/2023 12:27 PM
21	Infrastructure. Fiber optic lines would make a huge difference. We only have DSL or satellite.	5/23/2023 9:24 PM
22	lower cost	5/23/2023 7:08 PM
23	Lower cost, infrastructure for reliable service	5/23/2023 5:28 AM
24	Lower costs, availability, subsidizing programs, educational programming, and infrastructure improvements	5/22/2023 10:20 PM
25	Lower cost, knowledge, older population	5/22/2023 6:27 PM
26	Infrastructure improvements. We can only get it from long distance directional wifi antenna broadcast to us from 5 miles away.	5/21/2023 2:14 PM
27	Fiber Optic	5/21/2023 2:08 PM
28	lower cost	5/21/2023 1:12 AM
29	Lower cost	5/20/2023 8:00 PM

30	Infrastructure improvement and lower costs higher speed availability	5/19/2023 2:56 PM
31	All the above.	5/19/2023 2:43 PM
32	Education	5/19/2023 7:49 AM
33	Lower costs to match CentraCom supported cities just 13 miles away. Stop gouging rural towns.	5/18/2023 10:50 PM
34	Infrastructure improvements.	5/18/2023 4:28 PM
35	Lower Cost.	5/18/2023 3:37 PM
36	Lower costs.	5/18/2023 2:53 PM
37	Lower cost	5/18/2023 7:04 AM
38	lower costs, infrastructure improvements	5/18/2023 6:09 AM
39	Lower cost	5/18/2023 1:03 AM
40	More options. Less cost. Same provider offers faster speed at lower cost in Utah County than they do in Sanpete. Also, it is less reliable	5/17/2023 11:19 PM
41	Infrastructure improvements, lower costs, more choices	5/17/2023 9:17 PM
42	Lower costs	5/17/2023 7:48 PM
43	Fiber	5/17/2023 7:16 PM
44	Don't know	5/17/2023 4:03 PM
45	Infrastructure improvements	5/17/2023 3:24 PM
46	Don't know. Against government paying for things however.	5/17/2023 9:39 AM
47	Infrastructure improvements.	5/17/2023 8:04 AM
48	Lower costs	5/17/2023 5:48 AM
49	Infrastructure improvements with higher speed, more dependable internet service	5/16/2023 9:10 PM
50	Competition over land lines	5/16/2023 8:29 PM
51	Lower costs and infrastructure improvements	5/16/2023 6:51 PM
52	Cost of installation	5/16/2023 6:21 PM
53	More choice	5/16/2023 5:41 PM
54	Have more companies doing business in the area to allow competition in the market	5/16/2023 3:52 PM
55	I don't know	5/16/2023 3:51 PM
56	LOWER COST	5/16/2023 3:15 PM
57	Our fiber cost is double what it is from the same company in Urban areas.	5/16/2023 2:38 PM
58	Subsidizing for the area and availability	5/16/2023 2:26 PM
59	Infrastructure improvements, digital skills	5/16/2023 2:23 PM
60	lower costs	5/16/2023 12:30 PM
61	Infastructure improvements	5/16/2023 11:18 AM
62	Lower cost and faster speeds. More options.	5/16/2023 10:49 AM
63	Lower costs	5/16/2023 9:10 AM
64	Infrastructure improvements	5/16/2023 8:31 AM
65	Lower cost	5/16/2023 7:42 AM
66	Someone who speaks their language Spanish	5/16/2023 7:11 AM

67	it all comes down to cost it cost a lot per capita to privid competitive fiber to individuals. If they were to provide fiber to the home the cost would be really high and they would pass that on to me	5/16/2023 5:56 AM
68	lower price and better infrastructure	5/16/2023 1:13 AM
69	Help fuller broadband get more notoriety, he mostly expands thru word of mouth	5/16/2023 1:12 AM
70	Infrastructure. Interface cellular service with inside service.	5/16/2023 12:15 AM
71	Lower cost	5/15/2023 11:08 PM
72	All 4 of these plus maybe free internet hubs — one in each town. (Church?)	5/14/2023 5:11 AM
73	Lower cost and education	5/12/2023 10:58 AM
74	Lower costs and subsided programs	5/12/2023 8:04 AM
75	Infrastructure improvements	5/12/2023 7:47 AM
76	Infrastructure, lower costs	5/10/2023 5:51 PM
77	Lower cost. Fiber optic deployment	5/9/2023 8:53 PM
78	Lower costs, infrastructure improvements	5/9/2023 2:30 PM
79	Infrastructure	5/9/2023 10:50 AM
80	Lower costs for sure!	5/9/2023 10:32 AM
81	Lower cost, infrastructure improvements. (Google fiber or sponsored starlink would be nice!)	5/9/2023 10:26 AM
82	Lower costs, infrastructure	5/9/2023 9:03 AM
83	Subsidizing programs for internet service and more knowledge that this service is available.	5/9/2023 8:11 AM
84	skills, lower cost	5/9/2023 8:09 AM
85	Lower costs or subsidizing programs	5/8/2023 10:28 AM
86	Infrastructure improvements and lower costs	5/4/2023 6:13 PM
87	Infrastructure development and improvements. Also lower prices as there are lots of low income families in Millard county.	5/4/2023 5:20 PM
88	Lower costs	5/3/2023 9:45 PM
89	Infrastructure	5/3/2023 5:01 PM
90	Lower costs	5/3/2023 4:12 PM
91	Lower cost without compromising service or quality	5/3/2023 9:42 AM
92	lower cost and infrastructure	5/3/2023 8:41 AM
93	Lower costs, better service, better dependability	5/2/2023 8:54 PM

Q31 Do you have anything else to share about internet access in your area?

Answered: 78 Skipped: 64

#	RESPONSES	DATE
1	Faster speeds please!!!!!	6/3/2023 3:45 PM
2	Centracom has issues and there employees are drunk on the job. Centralink has 100-year-old equipment lines and they are horrible to work with. Richfield City Mayor Burrows is blocking Infowest from bringing in Fiber to Richfield because he is buddies with Centracom	5/30/2023 5:34 PM
3	Nope	5/30/2023 3:44 PM
4	Need more options. Xfinity internet in Utah county has affordable plans and offers discounts on equipment	5/30/2023 3:00 PM
5	No	5/29/2023 3:18 PM
6	For a rural area I think our access is excellent, South Central has put fiber to the majority of residences.	5/29/2023 1:20 PM
7	As soon as I can find a better altermative which isnt much III switch!	5/28/2023 10:35 AM
8	Need information about different providers, and costs to customers.	5/27/2023 11:50 AM
9	We're stuck in a monopoly who won't upgrade their system to allow higher speeds	5/27/2023 11:07 AM
10	No	5/27/2023 7:36 AM
11	rural area	5/26/2023 8:58 PM
12	No	5/26/2023 10:24 AM
13	No	5/25/2023 9:08 PM
14	I pay plenty, but it is still slow	5/25/2023 11:50 AM
15	No	5/25/2023 11:00 AM
16	Just because we are a small town, do not bypass us!	5/24/2023 10:48 PM
17	South Central keep saying it will get better.	5/24/2023 12:27 PM
18	Mine is excellent	5/23/2023 7:08 PM
19	No	5/22/2023 6:27 PM
20	We live out in the sticks, but a broadband line is buried out on the highway about a mile away from our house.	5/21/2023 2:14 PM
21	We need Fiber	5/21/2023 2:08 PM
22	ContraCom is the only provider here. The service is terrible and expensive. It's a monopoly.	5/21/2023 1:12 AM
23	No	5/20/2023 8:00 PM
24	Not at this time	5/19/2023 2:56 PM
25	No	5/19/2023 2:43 PM
26	My internet provider has quality service that is rarely down at a reasonable price.	5/19/2023 7:49 AM
27	CentraCom charges double of same service 13 miles away. Double that of Hurrucane, Utah. No more excuses, treat all areas equal CentraCom!	5/18/2023 10:50 PM
28	No	5/18/2023 4:28 PM

29	some times the access is spotty, and not consistent.	5/18/2023 3:37 PM
30	No	5/18/2023 2:53 PM
31	No	5/18/2023 7:04 AM
32	It is spotty, it will go out for no reason	5/18/2023 6:09 AM
33	No	5/18/2023 1:03 AM
34	Frequently is down.	5/17/2023 11:19 PM
35	No	5/17/2023 9:17 PM
36	No	5/17/2023 7:16 PM
37	Always going out	5/17/2023 4:03 PM
38	There are only two options where I live and both are slow and spotty	5/17/2023 3:24 PM
39	nope	5/17/2023 9:39 AM
40	No	5/17/2023 8:04 AM
41	Gtelco are doing a good job I don't have the outages other people have	5/17/2023 5:48 AM
42	Needs to be more reliable and consistent.	5/16/2023 9:10 PM
43	Southwest Central is a monopoly and is holding rural utah hostage	5/16/2023 8:29 PM
44	The options available are too few and the download speed (14) and upload speed (2) are ridiculous for what is paid, particularly compared to what is offered. More individuals could move to rural areas and continue to work in much better paying jobs via remote options, if there were better internet service available. What is available really makes it difficult (speaking from current experience).	5/16/2023 6:51 PM
45	Companies aren't interested in working with people to install.	5/16/2023 6:21 PM
46	No	5/16/2023 5:41 PM
47	My internet connection is often unstable.	5/16/2023 5:12 PM
48	No	5/16/2023 3:51 PM
49	ONLY THAT IT SUCKS	5/16/2023 3:15 PM
50	Not everyone can get satellite and there is no other choices	5/16/2023 2:26 PM
51	Personally my services diminish during rainy days and snow.	5/16/2023 2:23 PM
52	feel it's pretty good in our area	5/16/2023 11:33 AM
53	I would love high speed access so I can work from home.	5/16/2023 11:18 AM
54	Reliability. Seems like we have to reset/restart our modem quite often.	5/16/2023 10:49 AM
55	No	5/16/2023 9:10 AM
56	No	5/16/2023 8:31 AM
57	It is slow and expensive	5/16/2023 7:11 AM
58	bad provider that doesn't care about small communities not enough money	5/16/2023 1:13 AM
59	CentraCom is available to some, a very few have gone with starlink.	5/16/2023 1:12 AM
60	Faster thruput speeds. Lower prices.	5/16/2023 12:15 AM
61	Na	5/15/2023 11:08 PM
62	There's been sort of a monopoly. Only 1-2 options in places.	5/14/2023 5:11 AM
63	No	5/12/2023 10:58 AM
64	No	5/12/2023 8:04 AM

65	My cell company keeps sending me texts about their internet but it isn't available in our area, just big cities up north	5/12/2023 7:47 AM
66	The wireless option is good but expensive. It is the only option available as DSL or Fiber does not reach to my area.	5/9/2023 8:53 PM
67	No	5/9/2023 2:30 PM
68	Please invent and improve in more high speed wireless or fiber solutions!	5/9/2023 10:50 AM
69	No	5/9/2023 10:32 AM
70	I hope it gets better	5/9/2023 10:26 AM
71	No	5/9/2023 8:11 AM
72	It is very good	5/8/2023 10:28 AM
73	Really slow at certain times	5/4/2023 6:13 PM
74	Starlink is available, but it has gone from an average of 30mb download lows all the way down to 7-15mb lows in high usage times. More infrastructure needs to be put in place for wired broadband.	5/4/2023 5:20 PM
75	I would use a different company if available in Hinckley. I pay a lot for service that is not reliable	5/3/2023 5:01 PM
76	SouthCentral Communications has really taken real leadership in providing true fast internet with fiber optic infrastructure investments	5/3/2023 4:12 PM
77	There are only a couple of companies and super slow	5/3/2023 9:42 AM
78	We have provider, they also provide internet at a neighboring town for half price. Where is no competition the public suffers with high prices and poor service.	5/2/2023 8:54 PM

Q32 Tell us about the access to devices for people in your community.



ANSWER CH	HOICES		RESPONSES	
Most have a desktop or laptop computer at home.		:	22.92%	22
Most have a	tablet or smartphone at home.		38.54%	37
Most have a	desktop or laptop computer and a tablet or smartphone at home.		21.88%	21
Most do not	have devices at home but can access them elsewhere.		2.08%	2
Most do not	have access to devices at home or elsewhere.	!	5.21%	5
Other (please	e specify)		9.38%	9
TOTAL				96
#	OTHER (PLEASE SPECIFY)	DA	TE	
1	Unknown	5/3	80/2023 3:00 PM	
2	I have no idea	5/2	29/2023 1:20 PM	
3	Phone only	5/2	25/2023 11:00 AM	N
4	I presume most have devices at home, though I don't know a lot of other people's circumstances.	5/1	.7/2023 8:04 AM	
5	I do not know	5/1	.6/2023 5:12 PM	
6	Unknown	5/1	.6/2023 3:51 PM	
7	unknown	5/1	.6/2023 5:56 AM	

8	Not "most" but still many impoverished don't seem to understand the + power of internet, & possibly misuse it.	5/14/2023 5:11 AM
9	Some have tablets & desktops. Some only use smartphone for access. Some don't use the Internet at all.	5/8/2023 10:28 AM

Q33 Select the other ways your community accesses devices if they do not own them. Select all that apply.



ANSWER CHOICES	RESPONSES	
Work	58.70%	54
School	69.57%	64
Library	64.13%	59
Community Center	10.87%	10
Other (please specify)	10.87%	10
Total Respondents: 92		

#	OTHER (PLEASE SPECIFY)	DATE
1	Unknown	5/30/2023 3:00 PM
2	I don't know	5/29/2023 1:20 PM
3	Phones	5/27/2023 11:50 AM
4	Home	5/27/2023 11:07 AM
5	None	5/24/2023 12:27 PM
6	We have no community centers	5/16/2023 8:29 PM
7	Unknown	5/16/2023 3:51 PM
8	Friend or parent	5/16/2023 12:15 AM
9	Cell phone	5/15/2023 11:08 PM
10	Restaurants with free wifi	5/9/2023 10:26 AM

Q34 What barriers make it difficult for individuals in your area to access device(s)? (e.g., affordability, supply issues).

Answered: 81 Skipped: 61

#	RESPONSES	DATE
1	Affordability	6/3/2023 3:45 PM
2	cost	6/1/2023 8:34 AM
3	The cost	5/31/2023 12:31 AM
4	affordability, Price, No stores to purchase items.	5/30/2023 5:34 PM
5	Alot of it has to do with Transportation. We have no transportation and it's difficult for us to just go and access the Internet when u don't have Transportation	5/30/2023 3:44 PM
6	Affordability options	5/30/2023 3:00 PM
7	Supply	5/29/2023 3:18 PM
8	Affordability, the status quo charges what they want, we have to pay, but on the other hand, we have a GREAT percentage of people who need to get a job!!	5/28/2023 10:35 AM
9	Internet connection, affordability, information about providers.	5/27/2023 11:50 AM
10	Affordable	5/27/2023 11:07 AM
11	Affordability, very few provider choices	5/27/2023 7:36 AM
12	Affordability and to pickon people bully u into not saying they are not the one t you internetaking	5/26/2023 10:24 AM
13	Affordability	5/25/2023 9:08 PM
14	don't know	5/25/2023 11:50 AM
15	Affordability	5/25/2023 11:00 AM
16	Affordability	5/24/2023 10:48 PM
17	Rural area	5/24/2023 12:27 PM
18	Distance from town. Most people live on farms outside of city limits.	5/23/2023 9:24 PM
19	Affordability and supply issues	5/22/2023 10:20 PM
20	Affordability	5/22/2023 6:27 PM
21	Infrastructure.	5/21/2023 2:14 PM
22	Infrastructure	5/21/2023 2:08 PM
23	expensive	5/21/2023 1:12 AM
24	Cost	5/20/2023 8:00 PM
25	Age, access to areas with the technology	5/19/2023 2:56 PM
26	Affordability, purchasing and maintenance.	5/19/2023 2:43 PM
27	No barriers- just personal priorities.	5/19/2023 7:49 AM
28	COST	5/18/2023 10:50 PM
29	Distance	5/18/2023 4:28 PM
30	affordability.	5/18/2023 3:37 PM

31	Affordibility	5/18/2023 2:53 PM
32	Affordability	5/18/2023 7:04 AM
33	affordability	5/18/2023 6:09 AM
34	Cost	5/18/2023 1:03 AM
35	Distance, affordability, variety of services	5/17/2023 11:19 PM
36	Affordability	5/17/2023 9:17 PM
37	Affirdability	5/17/2023 7:48 PM
38	Unknown	5/17/2023 7:16 PM
39	Affordability	5/17/2023 4:03 PM
40	Affordability and availability	5/17/2023 3:24 PM
41	Don't think there are any. Low income can get a government cell phone with internet.	5/17/2023 9:39 AM
42	I can only speak for myself. It does seem to me that people are more likely to give up other things than do without the "latest" devices.	5/17/2023 8:04 AM
43	Affordability	5/17/2023 5:48 AM
44	Not sure	5/16/2023 9:10 PM
45	Supply is from 1 provider or starlink	5/16/2023 8:29 PM
46	Affordability	5/16/2023 6:51 PM
47	Cost to install	5/16/2023 6:21 PM
48	Affordable and access	5/16/2023 5:41 PM
49	Affordability	5/16/2023 3:52 PM
50	Unknown	5/16/2023 3:51 PM
51	COST	5/16/2023 3:15 PM
52	No where in our town to access devices if you dontown them	5/16/2023 2:38 PM
53	Distance	5/16/2023 2:26 PM
54	Affordability	5/16/2023 11:18 AM
55	Unknown	5/16/2023 10:49 AM
56	Affordability	5/16/2023 9:10 AM
57	Can't say with any certainty	5/16/2023 8:31 AM
58	Pay is too low and can't afford to buy.	5/16/2023 7:11 AM
59	Affordability	5/16/2023 6:16 AM
60	supply issues	5/16/2023 1:13 AM
61	Trees	5/16/2023 1:12 AM
62	Affordability!	5/16/2023 12:15 AM
63	Affordable	5/15/2023 11:08 PM
64	Not knowing what they need	5/14/2023 5:11 AM
65	Affordability	5/12/2023 10:58 AM
66	Affordability	5/12/2023 8:04 AM
67	Affordability	5/12/2023 7:47 AM
68	Affordable	5/10/2023 5:51 PM

69	High cost	5/9/2023 8:53 PM
70	Affordability	5/9/2023 2:30 PM
71	Affordability	5/9/2023 10:32 AM
72	affordability mostly	5/9/2023 10:26 AM
73	Affordability	5/8/2023 10:28 AM
74	?	5/4/2023 6:13 PM
75	Infrastructure, no cable or fiber to almost any of the houses in my area.	5/4/2023 5:20 PM
76	Affordable	5/3/2023 5:01 PM
77	Affordability	5/3/2023 4:12 PM
78	?	5/3/2023 10:59 AM
79	Affordability	5/3/2023 9:42 AM
80	cost, access	5/3/2023 8:41 AM
81	costs	5/2/2023 8:54 PM

Q35 What would make it easier for individuals in your area to access device(s)? (e.g., lower costs, subsidizing programs for device purchases).

Answered: 85 Skipped: 57

#	RESPONSES	DATE
1	Subsidizing programs for device purchase	6/3/2023 3:45 PM
2	lower cost and available access	6/1/2023 8:34 AM
3	Lower cost	5/31/2023 12:31 AM
4	Lower cost. More stores,	5/30/2023 5:34 PM
5	Lower Costs and Subsidizing programs	5/30/2023 3:44 PM
6	Lower costs	5/30/2023 3:00 PM
7	Lower costs	5/29/2023 3:18 PM
8	Lower costs, more scrutiny in who receives the subsidies, we have a big majority of people in pajama pants going to the grocery store at hours they should be working!! That tells me that they are not ill, or disabled, when they walk in of their own free will and buy cigarettes and cheetos!!	5/28/2023 10:35 AM
9	Lower costs lower costs for internet and devices to use.	5/27/2023 11:50 AM
10	Programs for device purchases	5/27/2023 11:07 AM
11	Lower costs	5/27/2023 7:36 AM
12	subsidizing programs for device purchases	5/26/2023 8:58 PM
13	Not admitting to anyone you are the one stealing and you are taking	5/26/2023 10:24 AM
14	Lower cost	5/25/2023 9:08 PM
15	lower cost	5/25/2023 11:50 AM
16	Lower cost	5/25/2023 11:00 AM
17	Higher wages	5/24/2023 10:48 PM
18	Lower costs	5/24/2023 12:27 PM
19	Lower costs for data plans on cellular providers	5/23/2023 9:24 PM
20	Subsidizing programs for device purchases, lower costs	5/22/2023 10:20 PM
21	Help to purchase	5/22/2023 6:27 PM
22	Lower costs. Infrastructure.	5/21/2023 2:14 PM
23	Fiber	5/21/2023 2:08 PM
24	make it cheaper	5/21/2023 1:12 AM
25	Lower cost	5/20/2023 8:00 PM
26	Subsidized programs	5/19/2023 2:56 PM
27	All the above.	5/19/2023 2:43 PM
28	Devices are provided for school children. For others there are few barriers and it's a personal priority decision.	5/19/2023 7:49 AM
29	Lower cost in 83642 to match Nephi 13 miles away!!	5/18/2023 10:50 PM

30	Availability	5/18/2023 4:28 PM
31	Lower costs, better devices.	5/18/2023 3:37 PM
32	Lower cost	5/18/2023 2:53 PM
33	Lower cost	5/18/2023 7:04 AM
34	lower costs, subsidizing programs for device purchases	5/18/2023 6:09 AM
35	Lower cost	5/18/2023 1:03 AM
36	All students already have devices because of school, but are returned over the summer. And are extremely filtered. Make them more open and available.	5/17/2023 11:19 PM
37	Lower costs	5/17/2023 9:17 PM
38	Affordability if both divices and service	5/17/2023 7:48 PM
39	Unknown	5/17/2023 7:16 PM
40	Lower cost	5/17/2023 4:03 PM
41	Lower costs	5/17/2023 3:24 PM
42	Can't think of anything maybe fed, state, and local cutting regulations that make the service price higher.	5/17/2023 9:39 AM
43	See #20.	5/17/2023 8:04 AM
44	Lower costs	5/17/2023 5:48 AM
45	Not sure	5/16/2023 9:10 PM
46	Remove the land line monopoly	5/16/2023 8:29 PM
47	Lower costs, subsidizing programs and education for the elderly for how to use.	5/16/2023 6:51 PM
48	Internet companies that want business	5/16/2023 6:21 PM
49	More choices and lower cost	5/16/2023 5:41 PM
50	I do not know.	5/16/2023 5:12 PM
51	Subsidized programs	5/16/2023 3:52 PM
52	Lower cost	5/16/2023 3:51 PM
53	LOWER COST	5/16/2023 3:15 PM
54	Lower cost	5/16/2023 2:38 PM
55	Lower cost and choices	5/16/2023 2:26 PM
56	subsidizing programs	5/16/2023 12:30 PM
57	Lower costs	5/16/2023 11:18 AM
58	Unknown	5/16/2023 10:49 AM
59	Lower costs	5/16/2023 9:10 AM
60	Again, I can't say with any certainty	5/16/2023 8:31 AM
61	Be available for families that are not (legal) born in this country	5/16/2023 7:11 AM
62	Lower costs	5/16/2023 6:16 AM
63	lower costs device purchases	5/16/2023 1:13 AM
64	Discouraged buying hughesnet	5/16/2023 1:12 AM
65	All of the above	5/16/2023 12:15 AM
66	Lower cost	5/15/2023 11:08 PM

67	Maybe trying out different devices for awhile	5/14/2023 5:11 AM
68	Subsidizing programs	5/12/2023 10:58 AM
69	Lower cost and subsidized programs	5/12/2023 8:04 AM
70	I'm not sure	5/12/2023 7:47 AM
71	Lower cost	5/10/2023 5:51 PM
72	Lower monthly cost. Fiber deployment.	5/9/2023 8:53 PM
73	Subsidizing programs for device purchases	5/9/2023 2:30 PM
74	Lower costs	5/9/2023 10:32 AM
75	yes, lower costs and financial help	5/9/2023 10:26 AM
76	Lower costs and knowledge of this being made available.	5/9/2023 8:11 AM
77	lower cost	5/9/2023 8:09 AM
78	Lower cost and education about using the Internet	5/8/2023 10:28 AM
79	?	5/4/2023 6:13 PM
80	Lower costs and infrastructure development	5/4/2023 5:20 PM
81	Lower cost	5/3/2023 5:01 PM
82	Lower costs	5/3/2023 4:12 PM
83	Lower costs or subsidizing programs	5/3/2023 9:42 AM
84	transportation	5/3/2023 8:41 AM
85	lower costs and better service	5/2/2023 8:54 PM

Q36 Is there anything else you'd like to share about devices in your area?

Answered: 48 Skipped: 94

#	RESPONSES	DATE
1	Nope	5/30/2023 3:44 PM
2	No	5/29/2023 3:18 PM
3	Sooner the improvement the better	5/28/2023 10:35 AM
4	None	5/27/2023 11:07 AM
5	No	5/27/2023 7:36 AM
6	Nobody wants it any other way then stealongit	5/26/2023 10:24 AM
7	No	5/25/2023 9:08 PM
8	No	5/25/2023 11:00 AM
9	No	5/24/2023 12:27 PM
10	No	5/22/2023 10:20 PM
11	We need Fiber	5/21/2023 2:08 PM
12	No	5/19/2023 2:56 PM
13	No	5/19/2023 2:43 PM
14	CentraCom is operated by Governors family and no excuse. Sanpete made CentraCom successful and they double charge us now,	5/18/2023 10:50 PM
15	No	5/18/2023 4:28 PM
16	No	5/18/2023 3:37 PM
17	No	5/18/2023 2:53 PM
18	No	5/18/2023 7:04 AM
19	Most people in the area use cell phones and cell service to access Internet, but it is spotty and expensive.	5/17/2023 11:19 PM
20	No	5/17/2023 9:17 PM
21	No	5/17/2023 7:16 PM
22	No	5/17/2023 3:24 PM
23	none	5/17/2023 9:39 AM
24	No	5/17/2023 8:04 AM
25	Why does all the state and federal \$ go into urban areas decades before rural communities are even considered? Why are we treated like second class citizens on EVERY ISSUE?	5/16/2023 8:29 PM
26	No	5/16/2023 6:51 PM
27	No	5/16/2023 6:21 PM
28	No	5/16/2023 5:41 PM
29	No	5/16/2023 5:12 PM
30	No	5/16/2023 3:51 PM
31	No	5/16/2023 2:26 PM

32	No	5/16/2023 10:49 AM
33	No	5/16/2023 8:31 AM
34	To expensive and has horrible service but we need it so we have to keep up with it	5/16/2023 7:11 AM
35	Reliability.	5/16/2023 12:15 AM
36	Na	5/15/2023 11:08 PM
37	Access to digital training would be amazing!	5/14/2023 5:11 AM
38	No	5/12/2023 10:58 AM
39	No	5/12/2023 8:04 AM
40	Nope	5/12/2023 7:47 AM
41	No	5/10/2023 5:51 PM
42	No	5/9/2023 2:30 PM
43	No	5/9/2023 10:32 AM
44	Even though we are remote there is very good access both from South Central and some cell phone providers using 5g technology	5/8/2023 10:28 AM
45	No	5/4/2023 6:13 PM
46	No	5/4/2023 5:20 PM
47	No	5/3/2023 4:12 PM
48	No	5/3/2023 9:42 AM



Q37 What is you	r race/ethnicity? Select	all that apply.
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ANSWER CI	HOICES	RESPONS	SES
American Ind	lian or Alaska Native	0.00%	0
Asian		0.00%	0
Black or Afri	can American	0.00%	0
Hispanic/Lat	no or Spanish Origin	2.00%	2
Native Hawaiian or Other Pacific Islander		0.00%	0
White		95.00%	95
Multiple ethnicity / Other (please specify)		3.00%	3
TOTAL			100
#	MULTIPLE ETHNICITY / OTHER (PLEASE SPECIFY)		DATE
1	Northern European. Please stop using "white"		5/23/2023 9:26 PM
2	Many		5/16/2023 2:26 PM
3	Do not wish to answer		5/3/2023 5:01 PM



O38 What	language is	spoken	most	often	in	vour	house	hold	12
200 Milat	iunguuge is	Spoken	most	Unchi		your	nouse		л ;

ANSWER C	HOICES	RESPONSES	
English		99.00%	99
Spanish		1.00%	1
German		0.00%	0
Arabic		0.00%	0
Chinese		0.00%	0
Navajo (Din	é)	0.00%	0
Other (pleas	se specify)	0.00%	0
TOTAL			100
#	OTHER (PLEASE SPECIFY)		DATE

There are no responses.



Q39 What is your household's gross annual income?

ANSWER CHOICES	RESPONSES	
\$0-\$24,999	17.53%	17
\$25,000-\$49,999	21.65%	21
\$50,000-\$74,999	18.56%	18
\$75,000-\$99,999	22.68%	22
\$100,000-\$149,999	16.49%	16
\$150,000 or more	3.09%	3
TOTAL		97



Q40 Which age groups live in your home? Select all that apply.

ANSWER CHOICES	RESPONSES	
0-10	15.00%	15
11-20	24.00%	24
21-30	10.00%	10
31-40	17.00%	17
41-50	23.00%	23
51-60	29.00%	29
61-70	43.00%	43
71 or older	20.00%	20
Total Respondents: 100		



Q41 Do students live at your household?

ANSWER CHOICES	RESPONSES	
Yes	31.00%	31
No	69.00%	69
TOTAL		100



Q42 Which education level? Select all that apply.

ANSWER CHOICES	RESPONSES	
Elementary school (kindergarten to 6th grade)	45.16%	14
Middle school (7th grade to 9th grade)	45.16%	14
High school (9th grade to 12th grade)	48.39%	15
College or university	58.06%	18
Adult education or technical training	16.13%	5
Total Respondents: 31		

Q43 What is the highest level of education completed by someone in your household?



ANSWER CHOICES	RESPONSES	
12th grade or less (no diploma)	1.96%	2
High school diploma or equivalent (GED)	4.90%	5
Career or technical education certificate	8.82%	9
Some college but no degree	22.55%	23
Associate degree	15.69%	16
Bachelor's degree	27.45%	28
Master's degree or doctorate	18.63%	19
TOTAL		102

Resident Response #	Date	Location			Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? (Select all that apply)	What speed is your internet service (download speed)? (Megabits per second = Mbps)	Which company do you use for internet?	What is the monthly charge for your internet service? Write "Unknown" if unknown.	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.						
		AOG	County	City/Town	Response	Response	Response	Response	Open-Ended Response	Open-Ended Response	Response	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/ch atting	Entertainment/st reaming services	Shopping	Gaming
1	6/22/2023 14:32	Six County AOG	Sanpete County	Fountain Green	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	Up to 100 Mbps	CentraCom	71	Yes	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
2	5/8/2023 10:53	Six County AOG	Sevier County	Annabella	Own	Yes, I have an internet connection at my residence.	l do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	Centra Com	46.53	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming
3	5/4/2023 16:24	Six County AOG	Sevier County	Annabella	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	InfoWest	10	No					Entertainment/stre aming services		Gaming
4	5/3/2023 9:17	Six County AOG	Sevier County	Annabella	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Infowest	69.95	No					Entertainment/stre aming services	Shopping	Gaming
5	4/30/2023 12:34	Six County AOG	Sevier County	Annabella	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Centracom	56	No	Remote working	Remote learning	Remote health care/telehealth		Entertainment/stre aming services	Shopping	Gaming
6	4/29/2023 20:54	Six County AOG	Garfield County	Panguitch	Own	No, I don't have an internet connection at my residence.												
7	4/16/2023 16:40	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	I do not know (you can test your internet speed at speedtest.utah.gov)	CenturyLink	75	Yes		Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
8	4/10/2023 20:45	Six County AOG	Millard County	Delta	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Centracom	\$60	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services		
9	4/5/2023 20:24	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connection at my residence.	l do not know	Up to 25 Mbps	CenturyLink	35	No					Entertainment/stre aming services	Shopping	

Resident Response #		Why don't you have internet access at your residence? Select all that apply.											How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life	Are you aware of the Affordable Connectivity Program, which provides a \$30 monthly discount for internet to low- income households?
	Other (please specify)	Initial connection fees are too expensive	Monthly charges are too expensive	I do not have a computer or tablet to use	l do not know how to use a computer or tablet	l do not know how to get internet service	I do not need it/am not interested in it	I have physical limitations	I am worried about privacy and others getting my information	An internet connection isn't available in my area	I access the internet at a public internet source, such as a library or a community center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response
1															Yes, I am aware of the Program, but do not participate in it or am not eligible.
2															No, and I am not interested.
3															No, and I am not interested.
4															Yes, I am aware of the Program, but do not participate in it or am not eligible.
5															No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
6										An internet connection isn't available in my area	3		100	D I could work from home, it would improve my entertainment and shopping. Righ now I use my phone as a hot spot. It would also save money.	No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
7															No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
8															Yes, I am aware of the Program, but do not participate in it or am not eligible.
9	surfing the web														No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.

Appendix A. Statewide Survey: Six County Region Responses

Resident Response #	What is your race/ethnicity? Select all that apply.		What language is spoken most often in your household?		What is your household's gross annual income?	Which age groups live in your home? Select all that apply.							Do students live at your household?	Which education level? Select all that apply.					What is the highest level of education completed by someone in your household?
	Response	Multiple ethnicity / Other (please specify)	Response	Other (please specify)	Response	0-10	11-20 21-30	31-40	41-50	51-60	61-70	71 or older	Response	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university	Adult education or technical training	Response
1	White		English		\$150,000 or more					51-60			No						Bachelor's degree
2	White		English		\$75,000-\$99,999							71 or older	No						Master's degree or doctorate
3	White		English		\$100,000-\$149,999)	11-20 21-30		41-50				Yes			High school (9th grade to 12th grade)	College or university		Master's degree or doctorate
4	White		English		\$50,000-\$74,999						61-70	71 or older	No						Some college but no degree
5	White		English		\$100,000-\$149,999				41-50	51-60			No						Master's degree or doctorate
6	White		English		\$75,000-\$99,999					51-60			No						Bachelor's degree
7	White		English		\$75,000-\$99,999						61-70		No						Master's degree or doctorate
8	White		English		\$75,000-\$99,999	0-10	21-30		41-50				Yes	Elementary school (kindergarten to 6th grade)			College or university		Associate degree
9	White		English		\$50,000-\$74,999			31-40			61-70	71 or older	No						Some college but no degree
Resident Response #	Date	Location			Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? (Select all that apply)	What speed is your internet service (download speed)? (Megabits per second = Mbps)	Which company do you use for internet?	What is the monthly charge for your internet service? Write "Unknown" if unknown.	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.							
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		AOG	County	City/Town	Response	Response	Response	Response	Open-Ended Response	Open-Ended Response	Response	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/ch atting	Entertainment/st reaming services	Shopping	Gaming	
10	4/5/2023 15:07	Six County AOG	Millard County	Delta	Soy dueño	Sí, tengo conexión a Internet en mi residencia.	Cable o línea de abonado digital (DSL, línea telefónica), No lo sé	No lo sé (puede probar su velocidad de Internet en speedtest.utah.gov)	Centracom	36	No	Trabajo remoto	Aprendizaje remoto		Video conferencias/chate ar		Compras	Juegos	
11	3/30/2023 18:58	Six County AOG	Millard County	Oasis	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Frontier	60	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming	
12	3/30/2023 18:53	Six County AOG	Sevier County	joseph	Own	Yes, I have an internet connection at my residence.	l do not know	10 Mbps or less	infowest	60	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming	
13	3/30/2023 10:40	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Infowest	69.95	No								
14	3/29/2023 20:15	Six County AOG	Sevier County	Joseph	Rent	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Century link	\$45	No	Remote working			Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming	
15	3/29/2023 17:37	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	CenturyLink	130	No	Remote working		Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping		
16	3/29/2023 15:40	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connection at my residence.	Satellite or mobile, Wireless	10 Mbps or less	Century Link	unknown	Yes		Remote learning	Remote health care/telehealth	Video conferencing/chatti ng		Shopping		
17	3/29/2023 14:34	Six County AOG	Sevier County	JOSEPH	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Infowest	\$49.95	No	Remote working	Remote learning	Remote health care/telehealth		Entertainment/stre aming services	Shopping		
18	3/29/2023 14:32	Six County AOG	Sevier County	Sevier	Own	Yes, I have an internet connection at my residence.	l do not know	Up to 25 Mbps	InfoWest	49.95	No	Remote working		Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping		
19	3/29/2023 12:24	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	Up to 100 Mbps	Century Link	\$45	No						Shopping		

Resident Response #		Why don't you have internet access at your residence? Select all that apply.											How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a \$30 monthly discount for internet to low- income households?
	Other (please specify)	Initial connection fees are too expensive	Monthly charges are too expensive	l do not have a computer or tablet to use	I do not know how to use a computer or tablet	I do not know how to get internet service	l do not need it/am not interested in it	I have physical limitations	I am worried about privacy and others getting my information	An internet connection isn't available in my area	I access the internet at a public internet source, such as a library or a community center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response
10															No, pero me gustaría tener información para saber si mi hogar cumple los requisitos. Si se selecciona esta opción, complete el formulario de contacto al final de esta encuesta.
11															No, and I am not interested.
12															Yes, I participate in the Program.
13	schooling														No, and I am not interested.
14															No, and I am not interested.
15															No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
16															No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
17															Yes, I am aware of the Program, but do not participate in it or am not eligible.
18															No, and I am not interested.
19	Bill Pay, checking email														No, and I am not interested.

Resident Response #	What is your race/ethnicity? Select all that apply.		What language is spoken most often in your household?		What is your household's gross annual income?	Which age groups live in your home? Select all that apply.								Do students live at your household?	Which education level? Select all that apply.					What is the highest level of education completed by someone in your household?
	Response	Multiple ethnicity / Other (please specify)	Response	Other (please specify)	Response	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71 or older	Response	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university	Adult education or technical training	Response
10	Hispano/latino o de origen español		Español		\$25,000-\$49,999			21-30	31-40	41-50	51-60			Sí	Escuela primaria (desde jardín de infantes hasta 6° grado)	Escuela intermedia (desde 7° grado hasta 9° grado)	Escuela secundaria (desde 9° grado hasta 12° grado)			Diploma de escuela secundaria o equivalente (GED)
11	White		English		\$75,000-\$99,999	0-10	11-20		31-40	41-50		61-70	71 or older	Yes	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)			Bachelor's degree
12	American Indian or Alaska Native		English		\$0-\$24,999	0-10			31-40					Yes			High school (9th grade to 12th grade)	College or university		Master's degree or doctorate
13	White		English		\$50,000-\$74,999						51-60			Yes				College or university		Associate degree
14	Native Hawaiian or Other Pacific Islander		English		\$0-\$24,999	0-10			31-40					No						Career or technical education certificate
15	White		English		\$0-\$24,999						51-60			No						Some college but no degree
16	White		English		\$50,000-\$74,999							61-70	71 or older	No						Career or technical education certificate
17	White		English		\$25,000-\$49,999							61-70		No						Associate degree
18	White		English																	
19	White		English		\$150,000 or more			21-30			51-60			No						Bachelor's degree

Resident Response #	Date	Location			Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? (Select all that apply)	What speed is your internet service (download speed)? (Megabits per second = Mbps)	Which company do you use for internet?	What is the monthly charge for your internet service? Write "Unknown" if unknown.	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.						
		AOG	County	City/Town	Response	Response	Response	Response	Open-Ended Response	Open-Ended Response	Response	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/ch atting	Entertainment/st reaming services	Shopping	Gaming
20	2/16/2023 10:06	Six County AOG	Sevier County	Elsinore	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line), Satellite or mobile, Wireless	Up to 25 Mbps	Verizon	unknown	Yes	Remote working	Remote learning		Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
21	2/6/2023 20:35	Six County AOG	Sevier County	Gunnison	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	Up to 100 Mbps	Gunnison Telephone	\$65	No	Remote working	Remote learning		Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
22	2/6/2023 9:51	Six County AOG	Sevier County	RICHFIELD	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Infowest	49.95	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming
23	1/27/2023 22:16	Six County AOG	Sanpete County	Ephraim	Rent	Yes, I have an internet connection at my residence.	l do not know	Up to 100 Mbps	МТСС	included in rent	No	Remote working				Entertainment/stre aming services		Gaming
24	1/27/2023 13:21	Six County AOG	Sevier County	Monroe	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	CentraCom	67	No			Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming
25	1/25/2023 12:36	Six County AOG	Sanpete County	Spring City	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	I do not know (you can test your internet speed at speedtest.utah.gov	Centracom	60+	No		Remote learning	Remote health care/telehealth		Entertainment/stre aming services	Shopping	
26	1/25/2023 8:08	Six County AOG	Sevier County	Monroe	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Centra com	49	No		Remote learning	Remote health care/telehealth				
27	1/25/2023 6:51	Six County AOG	Millard County	Fillmore	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line), Wireless	Up to 25 Mbps	Fuller broadband	\$120.00	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
28	1/24/2023 21:25	Six County AOG	Sanpete County	Fountain Green	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	Up to 25 Mbps	CentraCom	70	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
29	1/24/2023 16:31	Six County AOG	Sanpete County	MANTI	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	Manti Telephone/MTCC	\$70 before taxes	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	Gaming

Resident Response #		Why don't you have internet access at your residence? Select all that apply.											How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a \$30 monthly discount for internet to low- income households?
	Other (please specify)	Initial connection fees are too expensive	Monthly charges are too expensive	I do not have a computer or tablet to use	I do not know how to use a computer or tablet	I do not know how to get internet service	I do not need it/am not interested in it	I have physical limitations	I am worried about privacy and others getting my information	An internet connection isn't available in my area	I access the internet at a public internet source, such as a library or a community center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response
20															No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
21															No, and I am not interested.
22															No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.
23															Yes, I am aware of the Program, but do not participate in it or am not eligible.
24	research														No, and I am not interested.
25	Email														Yes, I am aware of the Program, but do not participate in it or am not eligible.
26	Scripture study														No, and I am not interested.
27															No, and I am not interested.
28															Yes, I am aware of the Program, but do not participate in it or am not eligible.
29															Yes, I am aware of the Program, but do not participate in it or am not eligible.

Resident Response #	What is your race/ethnicity? Select all that apply.		What language is spoken most often in your household?		What is your household's gross annual income?	Which age groups live in your home? Select all that apply.								Do students live at your household?	Which education level? Select all that apply.					What is the highest level of education completed by someone in your household?
	Response	Multiple ethnicity / Other (please specify)	Response	Other (please specify)	Response	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71 or older	Response	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university	Adult education or technical training	Response
20	White		English		\$50,000-\$74,999		11-20			41-50				Yes		Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university		Master's degree or doctorate
21	White		English		\$25,000-\$49,999			21-30	31-40		51-60			No						Bachelor's degree
22	White		English		\$25,000-\$49,999						51-60	61-70		No						Associate degree
23	White		English		\$50,000-\$74,999			21-30		41-50				No						Master's degree or doctorate
24	White		English		\$100,000-\$149,999							61-70		No						Master's degree or doctorate
25	White		English		\$75,000-\$99,999						51-60	61-70		No						Master's degree or doctorate
26	White		English		\$50,000-\$74,999								71 or older	No						Bachelor's degree
27	White		English		\$150,000 or more						51-60			No						Bachelor's degree
28	White		English		\$150,000 or more							61-70		No						Bachelor's degree
29	White		English		\$100,000-\$149,999		11-20			41-50				Yes			High school (9th grade to 12th grade)			Bachelor's degree

Resident Response #	Date	Location			Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? (Select all that apply)	What speed is your internet service (download speed)? (Megabits per second = Mbps)	Which company do you use for internet?	What is the monthly charge for your internet service? Write "Unknown" if unknown.	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.						
		AOG	County	City/Town	Response	Response	Response	Response	Open-Ended Response	Open-Ended Response	Response	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/ch atting	Entertainment/st reaming services	Shopping G	aming
30	1/24/2023 14:08	Six County AOG	Millard County	Hinckley	Own	Yes, I have an internet connectior at my residence.	Fiber optics	10 Mbps or less	CentraCom	46	No		Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
31	1/24/2023 13:30	Six County AOG	Sevier County	Salina	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL telephone line)	10 Mbps or less	Century link	50	No		Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
32	1/24/2023 12:05	Six County AOG	Sevier County	Joseph	Own	Yes, I have an internet connectior at my residence.	l do not know	10 Mbps or less	InfoWest	40	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
33	1/24/2023 11:18	Six County AOG	Sanpete County	Wales	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL telephone line)	10 Mbps or less	Centra Com	about \$90 per month	No	Remote working	Remote learning			Entertainment/stre aming services	Shopping	
34	1/24/2023 11:13	Six County AOG	Millard County	DELTA	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Century Link (Centra-Com)	\$38.90	No		Remote learning	Remote health care/telehealth		Entertainment/stre aming services	Shopping	
35	1/24/2023 10:39	Six County AOG	Sanpete County	Manti	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 1 Gigabit	Manti Telecom	95	Yes	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
36	1/24/2023 9:31	Six County AOG	Millard County	Delta	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov	Centra com	68.5	No	Remote working	Remote learning		Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	
37	1/24/2023 9:18	Six County AOG	Sanpete County	Fountain Green	Rent	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL telephone line)	Up to 25 Mbps -	Centracom	66	No	Remote working	Remote learning		Video conferencing/chatti ng	Entertainment/stre aming services	Shopping	

Resident Response #		Why don't you have internet access at your residence? Select all that apply.											How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a \$30 monthly discount for internet to low- income households?
	Other (please specify)	Initial connection fees are too expensive	Monthly charges are too expensive	l do not have a computer or tablet to use	I do not know how to use a computer or tablet	I do not know how to get internet service	I do not need it/am not interested in it	I have physical limitations	I am worried about privacy and others getting my information	An internet connection isn't available in my area	I access the internet at a public internet source, such as a library or a community center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response
30															No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.
31															Yes, I am aware of the Program, but do not participate in it or am not eligible.
32															No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.
33															No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.
34															Yes, I am aware of the Program, but do not participate in it or am not eligible.
35	Church Services														Yes, I am aware of the Program, but do not participate in it or am not eligible.
36															No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.
37															

Resident Response #	What is your race/ethnicity? Select all that apply.		What language is spoken most often in your household?		What is your household's gross annual income?	Which age groups live in your home? Select all that apply.						Do students live at your household?	Which education level? Select all that apply.					What is the highest level of education completed by someone in your household?
	Response	Multiple ethnicity / Other (please specify)	Response	Other (please specify)	Response	0-10	11-20 21-30	31-40 41-50	51-60	61-70	71 or older	Response	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university	Adult education or technical training	Response
30	White		English								71 or older	No						Master's degree or doctorate
31			English		\$25,000-\$49,999						71 or older	No						Master's degree or doctorate
32	White		English		\$75,000-\$99,999		11-20				71 or older	Yes				College or university	Adult education or technical training	Master's degree or doctorate
33	White		English		\$50,000-\$74,999		11-20		51-60			Yes				College or university		Some college but no degree
34	White		English		\$50,000-\$74,999			41-50			71 or older	No						High school diploma or equivalent (GED)
35	White		English		\$75,000-\$99,999	0-10	11-20	31-40				Yes	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)		Adult education or technical training	Master's degree or doctorate
36	White		English		\$75,000-\$99,999					61-70		No						Bachelor's degree
37																		

Resident Response #	Date	Location			Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? (Select all that apply)	What speed is your internet service (download speed)? (Megabits per second = Mbps)	Which company do you use for internet?	What is the monthly charge for your internet service? Write "Unknown" if unknown.	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.					
		AOG	County	City/Town	Response	Response	Response	Response	Open-Ended Response	Open-Ended Response	Response	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/ch atting	Entertainment/st Sh reaming services	opping Gaming
38	12/3/2022 8:57	Six County AOG	Millard County	Delta	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Commercial Business Radio	85	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre Sho aming services	opping Gaming
39	12/2/2022 18:57	Six County AOG	Sevier County	Central	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Infowest	50	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre Sho aming services	opping
40	11/29/2022 18:16	Six County AOG	Sanpete County	Fountain Green	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	CentraCom	\$129.95	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatti ng	Entertainment/stre Sho aming services	opping

Resident Response #		Why don't you have internet access at your residence? Select all that apply.											How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life	Are you aware of the Affordable Connectivity Program, which provides . a \$30 monthly discount for internet to low- income households?
	Other (please specify)	Initial connection fees are too expensive	Monthly charges are too expensive	I do not have a computer or tablet to use	I do not know how to use a computer or tablet	I do not know how to get internet service	l do not need it/am not interested in it	I have physical limitations	I am worried about privacy and others getting my information	An internet connection isn't available in my area	I access the internet at a public internet source, such as a library or a community center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response
38															No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.
39															No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.
40															

Resident Response #	What is your race/ethnicity? Select all that apply.		What language is spoken most often in your household?		What is your household's gross annual income?	Which age groups live in your home? Select all that apply.							Do students live at your household?	Which education level? Select all that apply.					What is the highest level of education completed by someone in your household?
	Response	Multiple ethnicity / Other (please specify)	Response	Other (please specify)	Response	0-10	11-20	21-30 3	31-40	41-50 51-0	0 61-	70 71 or olde	er Response	Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university	Adult education or technical training	Response
38	White		English		\$50,000-\$74,999						61-7	70	No						Bachelor's degree
39	White		English		\$50,000-\$74,999					51-6	0		No						Some college but no degree
40																			

Local Gov or Tribe Response #	Which municipality or county do you represent?	Do you feel knowledgeable about the current state of broadband internet coverage for the city/county you represent?	What tools and/or resources could Connecting Utah provide to help you learn about internet coverage in your area? Select all that apply.					Has the city/county you represent benefited from past efforts to expand internet access?	What were those efforts?	Are you willing to share your story?	Tell us about internet access for the people in your community. Select all that apply.						
	Open-Ended Response	Response	Webinars	Informational guides	Networking/relati onship-building opportunities	One-on-one instruction	Other (please specify)	Response	Open-Ended Response	Response	Some people who want internet access have it.	Some people want internet access but have no internet providers available.	Some people want internet provider options than those that are currently available.	Some people can't afford the internet option(s) available to them.	Some people aren't satisfied with the internet speeds available to them.	Some people do not want the internet.	Other (please specify)
1	Town of Joseph	Yes				One-on-one instruction		No			Some people who want internet access have it.		Some people want other internet service provider options outside of those that are currently available.	Some people can't afford the internet option(s) available to them.	Some people aren't satisfied with the internet speeds available to them.		
2 3	Manti Ephraim Airport Nephi	Yes Yes						Yes Yes	Encourage private provider to improv broadband access.	Yes e	Some people who want internet access have it.						
4	Six County AOG	Yes						Yes	Fiber	Νο	Some people who want internet access have it.	Some people want internet access but have no internet providers available.	Some people want internet provider options than those that are currently available.	Some people can't afford the internet option(s) available to them.	Some people aren't satisfied with the internet speeds available to them.	Some people do not want the internet.	
5	Millard School District	Yes						Yes	Grants to purchase hotspots as well as discounts for current providers	Yes				Some people can't afford the internet option(s) available to them.	Some people aren't satisfied with the internet speeds available to them.		
6	Six County AOG	Yes						Yes									

Local Gov or Tribe Response #	What barriers make it difficult for individuals in your area to access the internet? (e.g., affordability, infrastructure, service providers).	What would make it easier for individuals in your area to access the internet? (e.g., lower costs, subsidizing programs, infrastructure improvements).	Do you feel like your city/county has enough funding to expand broadband coverage to all homes?	Do you know the provider(s) in your area?	Have you met or talked to the provider(s) in your areas?	Is there anything else you'd like to share about internet access in your city/county?	Tell us how your community accesses the internet if devices are not available at their residence. Select all that apply.					What barriers make it difficult for individuals in your city/county to access device(s)? (e.g., affordability, supply issues).	What would make it easier for individuals in your city/county to access to device(s)? (e.g., lower costs, subsidizing programs).	Do you feel lik your city/cour has enough funding to provide intern capable devic to homes that cannot afford them?
	Open-Ended Response	Open-Ended Response	Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Work	School	Library	Community Center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response
1	affordability and service providers	More options for better internet, that is not so expensive	No	yes	some of them	I feel that because we are so small, that we are the last to be looked at. We pay for internet but don't get great service because of where we live. If our internet is slow we are usually told it's just the way it is. But we still have to pay our bill.	Work	School	Library			n/a	n/a	Νο
2 3	Affordability	Programs for low income individuals.	No	Centracom and CenturyLink	Yes	Our city has fiber to the home due to investments by Centracom.	Work	School	Library			Affordability	Programs for low income households.	No
4	Services available	availability of services	No	Centracom, century link, Hughes net, info west	On some topics	Not at this time	Work	School	Library			Most have devices, if not, age and affordability are big factors	Some don't want them, affordability	No
5	Affordability, lack of providers	Lower cost, infrastructure improvements, subsidies, education	No	Frontier, Centracom	Yes	Homes and Communities are spread out preventing hard wired internet connections	Work	School	Library			Devices aren't really an issue school district provides the. To each student for home use	N/A	Yes
6														

o you feel like our city/county as enough inding to rovide internet- apable devices b homes that annot afford iem?	Do you have anything else to share about devices in your city/county?
esponse	Open-Ended Response
0	Most people have the means to buy the devices they need or want. There are always a few that do not, but most of the kids have chrome books from school.
0	Not at this time
25	No

Community	What areas or	County	What	Tell us about					What barriers	What would	Do you have	Tel
Leader	residents do you		organization do	internet access					make it difficult	make it easier	anything else to	aco
Response #	represent?		you represent?	and how it					for individuals in	for individuals in	share about	dev
				relates to the					your area to	your area to	internet access	peo
				people you					access the	access the	in your area?	ser
				serve.					internet? (e.g.,	internet? (e.g.,		
									affordability,	lower costs,		
									knowledge,	subsidizing		
									infrastructure).	programs for		
										Internet service,		
										educational		
										digital skills		
										infrastructuro		
										improvements)		
	Open-Ended		Open-Ended	Somo pooplo	Somo pooplo	Somo noonlo	Somo pooplo	Somo noonlo do	Open-Ended	Open-Ended	Open-Ended	Por
	Response		Response	who want	want internet	want internet	can't afford the	not want the	Response	Response	Response	IXC.
				internet access	access but have	provider options	internet	internet.				
				have it.	no internet	other than those	option(s)					
					providers	that currently	available to					
					available.	are available.	them.					
1	San Juan County	San Juan County	USU Extension	Some people who		Some people want	Some people can't		affordability,	Lower	We have it at a high	Mo
			Create Better	want internet		internet provider	afford the internet		infrastructure	costs, infrastructure	cost and it is not	or s
			Health	access have it.		options other than	option(s) available			improvements,	always reliable, I	hon
						those that currently	to them.			subsidizing	have it at my home	
						are available.				programs	and it goes out	
											often because of	
											storms and other	
											things. I use my	
											internet for work	
											often	
Soloct the wave						What harriara	What would	le thoro anything	I			
vour community						make it difficult	make it easier	also you'd like				
accesses						for individuale in	for individuale in	to share about				
devices if they						your area to	your area to	devices in your				
do not own						access	access to	area?				
them. Oalact all												

devices if they do not own them. Select all that apply.						your area to access device(s)? (e.g., affordability, supply issues).	your area to access to device(s)? (e.g., lower costs, subsidizing programs for device purchases).	devices in your area?
Work	School	Library	Community Center	Our organization provides devices to residents	Other (please specify)	Open-Ended Response	Open-Ended Response	Open-Ended Response
Work	School	Library				Being able to afford them and supply	Lower cost and subsidizing programs	They are necessary for work and school and reliable affordable internet is a must

l us about the cess to rices for the ople you ve.
sponse
st have a tablet martphone at ne.

Elected Official Response #	Are you a local or state representative?	County	Which municipality, county or area do you represent?	Do you feel knowledgeable about the current state of broadband internet coverage for the area you represent?	What tools and/or resources could Connecting Utah provide to help you learn about internet coverage in your area?		Has the area you represent benefited from past efforts to expand internet access?	What were those efforts?	Tell us about internet access for the people you serve. Select all that apply.						What barriers make it difficult for individuals in your area to access the internet? (e.g., affordability, infrastructure).
	Response		Open-Ended Response	Response	Response	Other (please specify)	Response	Open-Ended Response	Some people who want internet access have it.	Some people want internet access but have no internet providers available.	Some people want internet provider options than those that are currently available.	Some people can't afford the internet option(s) available to them.	Some people do not want the internet.	Other (please specify)	Open-Ended Response
1	Tribal representative	San Juan County	Teec Nos Pos SE San Juan County	Yes	Other (please specify)	All of the above	No		Some people who want internet access have it.	Some people want internet access but have no internet providers available.	Some people want internet service provider options other than those that are currently available.	Some people can't afford the internet option(s) available to them.			Availability, and perhaps some users are fix- income families. Dependability and fixed rates are good.
2	Local representative	Juab	Mona	No	Webinars		Yes	Not many companies in area .	Some people who want internet access have it.	Some people want internet access but have no internet providers available.					Infrastructure

Elected Official Response #	What would make it easier for individuals in your area to access the internet? (e.g., lower costs, subsidizing programs, infrastructure improvements).	Do you feel like the area(s) you represent has enough funding to expand broadband coverage to all homes?	Do you know the provider(s) in your area?	Have you met or talked to the provider(s) in your areas?	Is there anything else you'd like to share about internet access in your area?	Tell us how the people you serve access the internet if devices are not available at their residences. Select all that apply.					What barriers make it difficult for individuals in your area to access device(s)? (e.g., affordability, supply issues).	What would make it easier for individuals in your area to access device(s)? (e.g., lower costs, subsidizing programs).	Do you feel like your area(s) has enough funding to provide internet-capable devices to homes that cannot afford them?	Do you have anything else to share about devices in your area?
	Open-Ended Response	Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Work	School	Library	Community Center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response	Open-Ended Response
1	lower cost, availability, and yes infrastructure improvements.		Yes, NTUA Choice, Cellular One	Vaguely - for my community not as a whole	Question 10 Answer: Yes and no	Work	School	Library	Community Center	Senior Citizens	Availability and mission statements for internet providers.	Lower costs, subsidized programs - additional funding would help	No	Needs services for a levels of our community on the Navajo Nation.
2	Infrastructure improvements	No	Century link	Yes	No				Community Center		Affordability, number of citizens	Programs	Yes	No



Appendix B: Community Partner Survey

This appendix contains the responses from the surveys distributed to Six County AOG's community partners, to get a better understanding of what current plans for broadband and digital access activities are already in place.

Q1 Contact Information

ANSWER CHOICES	RESPONSES	
Name	100.00%	7
Organization	100.00%	7
Department	85.71%	6
Phone	100.00%	7
Email	100.00%	7
City/Town	100.00%	7
Brief description of involvement with broadband	85.71%	6

#	ORGANIZATION	DATE
1	Town of Mayfield	5/25/2023 10:24 AM
2	South Sanpete School District	5/24/2023 7:55 AM
3	Kingston Town	5/23/2023 6:46 AM
4	Lynndyl Town	5/22/2023 3:42 PM
5	Centerfield City	5/22/2023 12:16 PM
6	Sevier School District	5/22/2023 10:38 AM
7	Sevier County	5/22/2023 8:45 AM
#	DEPARTMENT	DATE
1	Technology	5/24/2023 7:55 AM
2	Mayor	5/23/2023 6:46 AM
3	Council member	5/22/2023 3:42 PM
4	City Council	5/22/2023 12:16 PM
5	Technology Department	5/22/2023 10:38 AM
6	Economic Development	5/22/2023 8:45 AM

#	CITY/TOWN	DATE
1	Mayfield	5/25/2023 10:24 AM
2	Manti	5/24/2023 7:55 AM
3	Kingston	5/23/2023 6:46 AM
4	Lynndyl	5/22/2023 3:42 PM
5	Centerfield	5/22/2023 12:16 PM
6	RICHFIELD	5/22/2023 10:38 AM
7	Richfield	5/22/2023 8:45 AM
#	BRIEF DESCRIPTION OF INVOLVEMENT WITH BROADBAND	DATE
1	Identify families in need.	5/24/2023 7:55 AM
2	None	5/23/2023 6:46 AM
3	Consumer	5/22/2023 3:42 PM
4	Not much	5/22/2023 12:16 PM
5	District Technology	5/22/2023 10:38 AM
6	minimal	5/22/2023 8:45 AM

Q2 Do you currently have any broadband or digital access projects, plans, or initiatives underway?



ANSWER CHOICES	RESPONSES		
Yes	0.00%	0	
No	100.00%	6	
TOTAL		6	

Q3 Broadband Project Information

ANSWER CHOICES		RESPONSES		
Broadband P	roject Name	0.00%		0
Project Mana	ager or Company	0.00%		0
Project Mana	ager's Email (if known)	0.00%		0
#	BROADBAND PROJECT NAME		DATE	
	There are no responses.			
#	PROJECT MANAGER OR COMPANY		DATE	
	There are no responses.			
#	PROJECT MANAGER'S EMAIL (IF KNOWN)		DATE	
	There are no responses.			

Q4 What is the status of this broadband project?

Answered: 0 Skipped: 7

▲ No matching responses.

RESPONSES	
0.00%	0
0.00%	0
0.00%	0
0.00%	0
0.00%	0
0.00%	0
0.00%	0
	RESPONSES 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q5 Estimated Duration of Project (by months)

#	RESPONSES	DATE
	There are no responses.	

Q6 Estimated Total Project Cost

#	RESPONSES	DATE
	There are no responses.	

Q7 Is funding for this project secured? If so, please describe amounts and sources.

#	RESPONSES	DATE
	There are no responses.	

Q8 Describe the economic benefits of this project and how these benefits can be measured.

#	RESPONSES	DATE
	There are no responses.	

Q9 Do you have additional broadband projects, plans, or initiatives?

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	0.00%	0
TOTAL		0

Q10 Broadband Project Information

ANSWER CHOICES		RESPONSES		
Broadband P	roject Name	0.00%		0
Project Mana	ager or Company	0.00%		0
Project Mana	ager's Email (if known)	0.00%		0
#	BROADBAND PROJECT NAME		DATE	
	There are no responses.			
#	PROJECT MANAGER OR COMPANY		DATE	
	There are no responses.			
#	PROJECT MANAGER'S EMAIL (IF KNOWN)		DATE	
	There are no responses.			

BROADBAND INFRASTRUCTURE PLANNING - SIX COUNTY AOG COMMUNITY PARTNER SURVEY

Q11 What is the status of this broadband project?

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
Information gathering	0.00%	0
Community engagement	0.00%	0
Network planning/engineering	0.00%	0
Pre-construction	0.00%	0
Active construction	0.00%	0
Completed	0.00%	0
Other (please specify)	0.00%	0
Total Respondents: 0		
Active construction Completed Other (please specify) Total Respondents: 0	0.00% 0.00% 0.00%	0 0

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q12 Estimated Duration of Project (by months)

#	RESPONSES	DATE
	There are no responses.	

Q13 Estimated Total Project Cost

#	RESPONSES	DATE
	There are no responses.	

Q14 Is funding for this project secured? If so, please describe amounts and sources.

#	RESPONSES	DATE
	There are no responses.	

Q15 Describe the economic benefits of this project and how these benefits can be measured.

#	RESPONSES	DATE
	There are no responses.	

Q16 Do you have additional broadband projects, plans, or initiatives?

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	0.00%	0
TOTAL		0

Q17 Broadband Project Information

ANSWER CHOICES		RESPONSES		
Broadband Project Name		0.00%		0
Project Manager or Company		0.00%		0
Project Manager's Email (if known)		0.00%		0
#	BROADBAND PROJECT NAME		DATE	
	There are no responses.			
#	PROJECT MANAGER OR COMPANY		DATE	
	There are no responses.			
#	PROJECT MANAGER'S EMAIL (IF KNOWN)		DATE	
	There are no responses.			
BROADBAND INFRASTRUCTURE PLANNING - SIX COUNTY AOG COMMUNITY PARTNER SURVEY

Q18 What is the status of this broadband project?

Answered: 0 Skipped: 7

▲ No matching responses.

Information gathering0.00%0Community engagement0.00%0Network planning/engineering0.00%0Pre-construction0.00%0	ANSWER CHOICES	RESPONSES	
Community engagement0.00%0Network planning/engineering0.00%0Pre-construction0.00%0	Information gathering	0.00%	0
Network planning/engineering0.00%0Pre-construction0.00%0	Community engagement	0.00%	0
Pre-construction 0.00% 0	Network planning/engineering	0.00%	0
	Pre-construction	0.00%	0
Active construction 0.00% 0	Active construction	0.00%	0
Completed 0.00% 0	Completed	0.00%	0
Other (please specify) 0.00% 0	Other (please specify)	0.00%	0
Total Respondents: 0	Total Respondents: 0		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q19 Estimated Duration of Project (by months)

#	RESPONSES	DATE
	There are no responses.	

Q20 Estimated Total Project Cost

#	RESPONSES	DATE
	There are no responses.	

Q21 Is funding for this project secured? If so, please describe amounts and sources.

#	RESPONSES	DATE
	There are no responses.	

Q22 Describe the economic benefits of this project and how these benefits can be measured.

#	RESPONSES	DATE
	There are no responses.	

Q23 Do you have additional broadband projects, plans, or initiatives?

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	0.00%	0
TOTAL		0

Q24 Please list any additional broadband projects, plans, or initiatives.

#	RESPONSES	DATE
	There are no responses.	

Q25 Does your organization have any dedicated positions related to broadband expansion?



ANSWER CHOICES	RESPONSES	
Yes	16.67%	1
No	83.33%	5
I don't know	0.00%	0
TOTAL		6

Q26 Please list the position, employment status, and roles for any dedicated broadband positions.

ANSWER C	HOICES	RESPONSE	S	
Contact Nam	ie	0.00%		0
Title		0.00%		0
Department		0.00%		0
Status (full-ti	me, part-time, volunteer)	0.00%		0
Role		0.00%		0
#	CONTACT NAME		DATE	
	There are no responses.			
#	TITLE		DATE	
	There are no responses.			
#	DEPARTMENT		DATE	
	There are no responses.			
#	STATUS (FULL-TIME, PART-TIME, VOLUNTEER)		DATE	
	There are no responses.			
#	ROLE		DATE	
	There are no responses.			

Q27 Are there additional broadband-specific positions within your organization currently?



ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	100.00%	1
TOTAL		1

Q28 Please list the position, employment status, and roles for any dedicated broadband positions.

Answered: 0 Skipped:	7	
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ANSWER CHOICES		RESPONSES		
Contact Name		0.00%		0
Title		0.00%		0
Department		0.00%		0
Status (full-ti	me, part-time, volunteer)	0.00%		0
Roles		0.00%		0
#	CONTACT NAME		DATE	
	There are no responses.			
#	TITLE		DATE	
	There are no responses.			
#	DEPARTMENT		DATE	
	There are no responses.			
#	STATUS (FULL-TIME, PART-TIME, VOLUNTEER)		DATE	
	There are no responses.			
#	ROLES		DATE	
	There are no responses.			

Q29 Are there additional broadband-specific positions within your organization currently?

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	0.00%	0
TOTAL		0

Q30 Please list the position, employment status, and roles for any dedicated broadband positions.

ANSWER CHOICES RESPONS		RESPONSE	S
Contact Nan	ne	0.00%	
Title		0.00%	
Department		0.00%	
Status (full-t	ime, part-time, volunteer)	0.00%	
Role		0.00%	
#	CONTACT NAME		DATE
	There are no responses.		
#	TITLE		DATE
	There are no responses.		
#	DEPARTMENT		DATE
	There are no responses.		
#	STATUS (FULL-TIME, PART-TIME, VOLUNTEER)		DATE
	There are no responses.		
#	ROLE		DATE
	There are no responses.		

Answered: 0 Skipped: 7

0

0

0

0

0

Q31 Are there additional broadband-specific positions within your organization currently?

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	0.00%	0
TOTAL		0

Q32 Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

#	RESPONSES	DATE
	There are no responses.	

Q33 Has your organization explored or had interest in additional, broadband-specific staffing?



ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	100.00%	6
I don't know	0.00%	0
TOTAL		6

Q34 To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.



ANSWER CHOICES	RESPONSES	
Community broadband survey	16.67%	1
FCC Map Challenges	0.00%	0
Internet Speed Test	33.33%	2
Utility mapping	0.00%	0
I'm not aware of any data collection efforts	66.67%	4
Total Respondents: 6		

Q35 Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

#	RESPONSES	DATE
1	No	5/25/2023 10:26 AM
2	Unknown.	5/22/2023 3:45 PM
3	N/A	5/22/2023 12:17 PM
4	I am not aware of any impediments to the expansion of broadband. We do not have any plans to create policies that allow aid.	5/22/2023 8:48 AM

Q36 Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

#	RESPONSES	DATE
1	No	5/25/2023 10:26 AM
2	Yes. Leamington has a locally implemented and supported WiFi bridge to Lynndyl for high speed internet with Frontier as a second-rate service in the area.	5/22/2023 3:45 PM
3	Not that I'm aware of.	5/22/2023 12:17 PM
4	No.	5/22/2023 8:48 AM

Q37 Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?



ANSWER CHOICES		RESPO	DNSES	
Existing tow	er space	0.00%		0
Dark fiber		0.00%		0
Existing righ	ts-of-way	25.00%)	1
Public lands		0.00%		0
Utility poles		0.00%		0
Not interested in sharing resources at this time		0.00%		0
I don't know		75.00%)	3
Other (please specify)		0.00%		0
Total Respondents: 4				
#	OTHER (PLEASE SPECIFY)		DATE	

There are no responses.

Q38 Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.



ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	60.00%	3
I don't know	40.00%	2
TOTAL		5

Q39 Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

#	RESPONSES	DATE
1	We have had a new phase in a subdivision that seems to have had local telephone companies doing work for internet. But none have informed the Town of it. Just noticed from some Blue Stakes requests.	5/25/2023 10:28 AM
2	We would like several, but don't have any planned that I know of.	5/22/2023 3:46 PM
3	not applicable	5/22/2023 8:50 AM

Q40 What support does your organization need from the Utah Broadband Center moving forward?

#	RESPONSES	DATE
1	Unknwn	5/25/2023 10:28 AM
2	Knowledge on processes and policies to make it easier to work with broadband.	5/22/2023 3:46 PM
3	Our organization does not need any support. The private sector is taking care of broadband accessibility in Sevier County; therefore, the County is not actively working on any project. It does not make sense for a government entity to duplicate what the private sector is already doing.	5/22/2023 8:50 AM

Q41 Does your organization have a broadband committee or similar working group tasked with expanding broadband?



ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	80.00%	4
I don't know	20.00%	1
TOTAL		5

Q42 If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Answered: 0 Skipped: 7

▲ No matching responses.

ANSWER CHOICES	RESPONSES	
State, county, or municipal entities	0.00%	0
Schools	0.00%	0
Libraries	0.00%	0
Tribal entities	0.00%	0
Health care organizations	0.00%	0
Public safety or emergency management	0.00%	0
Economic development organizations	0.00%	0
Local internet service providers	0.00%	0
Other governmental entities	0.00%	0
Other (please specify)	0.00%	0
Total Respondents: 0		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	



Appendix C: Stakeholder Meeting Notes

The following pages include notes from stakeholder meetings and workshops gathered as part of the Six County AOG local broadband planning outreach. Stakeholder meeting and workshop notes gathered as part of the Connecting Utah statewide outreach in the Six County area are also included as part of this appendix.

Six County AOG | Statewide Connecting Utah Workshop | Jan. 19, 2023

In attendance: Millard, Sanpete, Piute counties

Attendees include Millard school district, Lynndyl Town, Leamington, AOG

- Any questions for us?
 - No response
- What is connectivity like in your communities right now?
 - Learnington has CentraCom, internet at the firehouse, none of the homes have been connected yet. CentraCom contract is supposed to wire every home in Learnington, but right now have a relay from Lynndyl to Learnington and then to homes. Don't know what the speeds are now, CentraCom said it will be gig speed FTTH once built out
 - 473 homes between Meadow, Leamington, and Kanosh
 - Will add more homes that have built since then
 - State broadband grant, going through design review now, should have them done by the fall
 - Horrocks technical team connecting with ISPs
- Places without connectivity, how have you been accessing internet? Where do you go? Are there community resources that provide internet for residents?
 - Lynndyl is wired, has CentraCom and Frontier (but not as used)
 - Don't have places other than homes here unless get to Delta
 - CentraCom has gig capable coax (not symmetrical) now, working on building out for fiber, synchronous fiber
 - Lynndyl has 26 Mbps down, according to speed test
- Is more connectivity needed?
 - Not sure how connected people are
 - Frontier is being used by some people, just above dialup when moved in, had to limit speed because of copper to 130, otherwise they would lose people
 - CentraCom has some licensed wireless spectrum
- Accessibility
 - Do people have skills needed to use it?
 - Do kids have access at home for homework?
 - Every spring survey students to get a feel for who has access and who doesn't; about 12% do not have access for whatever reason
 - A lot of the issues are language barriers (immigrant population), affordability
 - Especially during pandemic, schools had wifi carry to parking lots, had quite a few students coming to schools during pandemic
 - Have wifi on all school buses
 - Have hotspots available for checkout, but don't work in West Desert communities; Garrison, Gandy, Eskdale (not sure about spelling)
 - More of an education issue there; not sure who to contact or how to get subsidies, something that the school can help share information about

- Typically advertise online, not the best route to reach some of those people. Connecting Utah can provide printed fliers in Spanish for the school to share out. Influx of immigrants from Peru, provided the students with Chromebooks, but a lot of times access to the internet is the issue
- How frequently do students have to get online to submit things?
 - They have workarounds, teachers have been good to work with students, not really a situation where they have to complete the work at home. Teachers will work around with them. College classes are a different story
 - Do they have remote learning for snow days, etc. as a fall back?
 - District has talked about it, the plan is to do that if there was a snow day but haven't had to do that. Pretty rare to have a snow day in their county. Execution of the plan might be challenging
 - Grades 6-12 have devices at home from school, elementary school students haven't gotten one (teachers haven't requested). Would really need a day in advance to know there would be a snow day to send devices home with the kids, and that probably won't happen because they usually don't make the call until the day of
- During COVID, sent home device with every student. Every student has a Chromebook at school, 6-12 have devices at school and then received older devices to use at home
- Infrastructure expansion barriers
 - Railroads and canal crossings can take years
 - Learnington has 8-10 homes on the other side of the railroad, that's a challenge for aerial or underneath
 - Had a bill in legislature last year about crossings, may have canal one this year
 - Cities are usually pretty excited to have the service, so usually good to work with
- Digital literacy
 - Law enforcement perspective, seeing more people becoming victims of cybercrime, losing money to scammers
 - Fairview will work with CentraCom and in Sanpete to do programs at senior centers about safety online
 - That's biggest community awareness issue right now, have three situations right now that are over \$100K each just in Fairview
 - Liz hasn't seen a lot of programs in the state in the cybersecurity area, would love to learn how it goes and who people are that get reached
 - Most of communities in Sanpete have a pretty active senior citizen group, will try it there first and then report back
 - Developing own curriculum right now, basic internet security, sure it will change as go.
 Educating on warning signs and making sure they are being recognized
 - Simple stuff about how power companies wouldn't ask for certain things, tactics to do
 - Who to call before doing the first thing (CentraCom, grandchild, etc.)

- Don't have actual materials yet, building as go
- Bringing it up because seeing a big need
- Happens everywhere; want to ask more specific questions for future workshops
- Liz mentions CFPB resources
- Libraries and senior centers
 - How spread out are they?
 - Nine communities that feed Delta High School, Delta has the only library, have to travel 20 miles going to the library
 - Don't see a lot of people using the computers at the library, seeing the same people most of the time
 - One lives at the Sands (low-income housing area)
 - Drive a considerable distance to go ahead and do anything
 - 12 senior centers in the region, usually pretty spread out. Some counties have 2-3, many only have one
 - Do they have good participation from senior individuals
 - Most people use libraries for computers, don't think the senior center in Delta has access to computers
- Economic development
 - Growth? Challenges?
 - Have several people that work from home, really restricted by speeds. That's why contacted CentraCom to get fiber in Leamington so could get speeds required to work from home. Grateful to have that coming for people to work from home
 - Telehealth? Are people using that a lot in your community?
 - Most people travel for medical care, doubt that there's that much telemedicine going on
- AOG perspective
 - In the larger cities and towns, the infrastructure is fairly well built out, been great progress made as of late to make sure the infrastructure is there
 - Biggest issues are small communities; Wayne County, Learnington, Lynndyl. Thinks South Central is running fiber to Wayne County, had only satellite before
 - Richfield just got finished, crews in Redmond, Aurora, Elsinore, Venice
 - Where fiberoptics isn't feasible, using licensed spectrum wireless, have that all through CentraCom portion. That can be done really quickly, have done it for as few as three families in Scipio
 - Options even when not feasible for FTTH, can still get 250 Mbps quickly and reasonably
- Cost/affordability
 - CentraCom, as of Feb 1 won't have 25 Mbps packages, will be moved up to 50 Mbps with no change. \$35 for that, can get gig up to \$90 for that area. Trying to make it price by bandwidth, no matter what technology you are on. Effort to keep up with actual need, trying to upgrade people according to need
 - Have 450 people on ACP, had 800 when on EBB
 - Also have someone working with school district, if the district knows of family that doesn't qualify for ACP, CentraCom will put in for free. School districts have been really good working with that, identifying people who don't qualify for EBB/ACP
 - Other providers in area

- Yes, have other providers. Manti and Gunnison Telephone in Sanpete, participate in ACP/EBB. Manti will also give service for free if school district identifies people
- Millard has Frontier, not as involved in local community so may not be as flexible with ACP enrollments
- Sevier has InfoWest, participates in ACP
- Other languages or tools needed to help those who are not English-speaking?
 - CentraCom has CSRs that speak Spanish, otherwise encourage people to use online chat feature and use Google translate and translation tools
 - Just let Horrocks know what other languages are needed
- Other digital skills gaps
 - Last summer, Lynndyl got website, online bill pay, not sure that people know about those resources or how to access those yet
 - What things would you really want us to focus on over the next few years?
 - Interested in the grant—want more info
 - Want to make sure that students have access to online higher ed, have perfect connection to be able to do that. Tuition for in-person getting more costly, people want to educate at home
 - Subsidized internet, want a clearer path on how to accomplish that for students that are in need, requires a lot of paperwork, so if there's any way to minimize that, that's a real turnoff for migrant families or people who aren't able to go through the hoops. Clearest possible route to apply for subsidized internet
 - ISP one-on-one meetings going well, would like additional info on digital literacy, trying best on affordability programs and working on it legislatively from state USF. More about broadband goals than the plan
 - Making sure that speeds are good enough that can get what we need to done at school and work, make sure have availability
 - Happy to hear that doing outreach to ISPs, have the most data
 - Six County will look at grants to see if that is of interest

Breakout Room

0

Attendees

- Anne Williams Breakout Room Facilitator, Connecting Utah
- Brian Breakout Room Technical Expert, Connecting Utah
- Courtney Bovee Breakout Room Support, Connecting Utah
- Liz Gabbitas Equity Lead, Connecting Utah
- Vikram Ravi Equity Support, Connecting Utah
- Claire Warnick Program Manager, Connecting Utah
- Eleise Lowe Telecomms Support, Connecting Utah
- Drake Chappell Millard School District

- Brad Welch- Fairview City Mayor
- Tyler Timmons SCAOG
- William Finlinson Leamington Mayor
- Amber Lloyd Lynndyl City Council

What does internet connectivity look like in your community?

- William Finlinson CentraCom has a contract that they applied for and they have internet at the firehouse, but no homes have been connected. They were supposed to wire every home, but right now they just have a relay to each house – unsure on speeds.
- Brad Welch (also CEO of CentraCom) he said it will be Gig speed throughout. Every home (473 homes in a couple towns), things may have been built. Since it is a state broadband grant, horrocks is approving the design, should have all three done by fall

How do people access internet now? Are there local resources?

• Amber Lloyd– got CentraCom a couple years ago – don't have other places to get internet, unless they go to Delta. Brad – gig capable coax, they are on the list to get fiber to the home. Amber took the speed test and it said 26.

How do you feel about connectivity in your area?

- Amber Lloyd thinks they are all connected (around 80 homes) but she isn't sure.
- William Finlinson some people are using frontier, but it was just above dial up but they had to limit speeds so all houses could access.
- Brad Welch says usually wireless system is 10-15Mbps

What would change in your community if everyone had access to high-speed internet

and devices?

- William Finlinson they have people who want to work from home but cant because of the speed
- Drake Chappell every spring they survey their students about 12% do not have access to
 internet. Issues include a lot of immigrants, so language barriers and affordability. They set up
 their schools for wifi to expand on school grounds and busses. Have hot spots for check out, but
 west dessert it does not work. Says map says they have access, but he says it is probably wrong.
 They give students a chromebook but accessibility can be an issue.
 - Teachers have been good to work with students who need to do homework at school
 - Is there remote learning on snow days? It can happen if there is another snow day. Haven't had to do it but he is worried about logistics.
 - During covid each kid had chromebook at school, older devices are given to kids for home use.

What infrastructure assets are available in your community? Conduit? Tower access?

Right-of-way?

- Tyler Timmons in more larger cities and towns, he feels the infrastructure is pretty well built out. South central has been running to Wayne county because they have only had satellite internet. Feels this will help.
- Where fiber isn't feasible, brad said they have a satellite option with a tower that works and Is quick. It provides 250 meg.
 - Current customers 50 megs \$35 up to a Gig for \$90. Price is by bandwith not by the delivery. Feb 1 changes are coming. 450 customers currently on the ACP program to help with costs. School districts let them know homes that may not qualify for the program, and Brad's company still provides that service free of charge.
 - Manti telephone, Gunnison telephone, frontier. Local providers participate in those programs.
 - CentraCom communicates with folks with language barrier on their chat which he said works very well.
- Railroads and Canal crossings can take years Brad
- Learnington has 7 homes across the railroad which complicates things. But cities have been good to work with.
- Brad is seeing more online crimes and victims falling for scams Fairview is doing programs at senior centers to educate at safety. That is his biggest community awareness issue right now.
 - Liz added in that as part of the state they want to help with that and are interested in learning to see how it works for Brad.
- William delta has the only library, but he doesn't see many people using internet, but computers so maybe device is an issue there
- Tyler 12 senior centers throughout the country region, they are spread out

What do you want us to focus on over the next couple of years?

- William interested in the grants want info via email and he can review
- Drake subsidized internet of there is anyway to minimize paperwork for that it is real barrier for those who need it
- Amber making sure speeds are good enough so people can work and live
- Amber said their biggest issue is getting people to go online for town resources. Anne mentioned there is money to apply for to help pay for training/education on these gaps.

Do you see any planning from the AOG level for applying for funding?

• Tyler – has a unique perspective – can help get this out to make it a coordinated effort and would need to confirm that with counties.

- Claire timeline is a quick turnaround pretty quick. Accepting applications through feb 2 (it is fairly quick, no match requirement)
- Tyler will talk about it as an agency and then will roll it out if they can

Breakout Room

In attendance:

Nate Palmer-

Brad Welch- Fairview City Mayor

Seth Atkinson-

Shay Morrison- No device or access to a provider.

Michele- Richfield-

Centracom Century Link Infowest a few with Hughes Net/Starlink

- No coverage- very rural towns (Kanosh, Sigaurd)
- Varries by location- Century Link, Centracom has fiber in some neighborhoods.
- Nephi/Juab County- Seth Atkinson- Nephi City- Started looking at expanding broadband, and looking at municipal ISP. Centracom did fiber to the home, working on last little bits of town. Interested in affordability. Centurylink doesn't care about rural communities.
- 1G fiber for \$80/month
- Levan runs own municipal network-did copper. Contract with Centracom. But owned by Levan.
- State law is prohibitive for municipal ISPs. ISPs and Cities should work in collaboration with each other. Municipalities cant resell to residents.
- Michele- Richfield City- Centracom wants to be on City Council agenda- discuss fiber connections to homes.
- Haley- Joseph- Doesn't know what is available in town? When they call providers, they say they are too small for connection. Won't serve because there isn't. Fiber accessibility in
- Had someone contact town about fiber optics- pretty premature.
- Richfield requires builders to put in conduit.
- Mona-
- Austin special service district- Lizard bench- mainly primary residences, utility challenges
- Richfield- largest employer is school district. Daytime population is 12-14K. A lot of people traveling into city for work. Struggling because they don't have funding to provide gas power fiber optics to outlying areas. Want to use tax increment funding to help, haven't had any takers. Working on general plan to locate economic, business areas. Got a grant to do a road around the business park. 2630 South to 325 W. Business park. Road would be 325 W/2850 S.
- Wayne County- recently been running lines through the towns there. South Central serving.
- Dana Erickson- with Piute County- South Central laying fiber in all communities. South Central is only option and it is expensive. Roughly \$80/month Circleville and Marysville is done. Junction next. Outlying areas use Starlink. Angle showing as wireline- where is the backbone?
- Eureka/Silver City- issues with connectivity.
- Eagle Point- isolated, summer homes
- Would love ACP for Piute County- Connect with Dana.
- Broadband Plans- cap of \$50K for funding. AOG could apply for more than one county.

- Forward grant
- Dana- Piute County- got a grant to build a remote work innovation center. Media center, school will have access to media center, rent out workspaces, Similar to Garfield County. Building currently has access to high speed fiber.
- Jay- Centracom at council meeting, said they need 300 people to lay conduit. Mona- planning funds could be used to survey the community.
- Dana- doing resource Fair in March.

Breakout Room

Juab, Sevier, Wayne Counties

Providers

- Richfield Centracom, Century Link, Infowest, Hughes Net (on the outskirts), Starlink
- Method varies
- Centracom and Century link have some fiber in neighborhoods, not all
- Hughes net is mostly satellite in the outer parts of town
- Kanosh, Sigurd, Venice, etc. mostly rural areas struggling to connect
- Seth Not everything is like Provo muncipal ISPs is an option that needs to be explored in these rural communities - where big ISPs don't care - Nephi - Centracom has been a great partner and did a fiber to the home build for most of the city and is working to get all of the city connected.
- Seth haven't created connectivity plans, because much of it is up to ISPs.
- Laws that prohibit the municipalities to run ISPs is difficult.
- Affordability is a big concern
- Can get 1 Gig fiber to the home for \$80+/month
- Levan runs their own municipal ISP. Is an option that really works needs to be explored on a state level. They may contract with Centracom to operate it, but they own it.
- State law seems to be prohibitive for municipal ISPs to form. Governor Herbert was very against these ideas.
- CentryLink doesn't care about rural communities and is not helpful.
- Michelle Jolley
- Centracom has asked to be on city council next week to discuss fiber networks to homes. (Richfield)
- Jay had CentraCom at their council meeting and they said they need hundreds of people who need service to make it worth expanding there.
- There are some new developments that are not yet completed, but the city requires conduit to be placed for internet.
- Haley Obray Joseph
- Not sure what is available. They do CentryLink and Infowest. Whenever they call a company, they seem to say they are too small and won't service their area. Lives past Joseph in Sevier most of them use Infowest and often can't have new people sign up for it because there is not enough bandwidth in the area to accommodate new customers.
- Had someone contact the town about putting in fiber optic, but it's very premature right now.
- Challenges
 - Lizard bench area has a lot of challenges with other utilities as well as broadband because of how it was structure when they started. They are mostly primary homes.

- Schooling
- During the pandemic had Chromebooks, but children are not allowed to take them home. High school kids are allowed to take them home. Students may go to libraries for internet connection for homework. They put two hotspots at city parks (Michelle).
- Economic Development
 - Richfield
 - largest employer is school district in the community, possibly the county daytime population is between 12-14,000 there are people who come to work here.
 - Don't have the funding to provide cable, fiber optics, gas, power, etc. to outer edges of the communities.
 - Just got a grant (through EDA) to put a road in around their business park (2630 south to 325 West, 2850 South)
 - Wayne County
 - A provider is running lines possibly SouthCentral is their only option, but they are working to get fiber in all of the communities.
 - SouthCentral is in the process of laying fiber in Piute communities the only problem is that it is the only provider and it expensive. About \$80/month, which is hard for lowincome families to afford.
- Action Items
 - Send Dana Erickson ACP fliers for utility mailers.
 - Send ACP information to Seth Atkinson
- Send Local Planning Grant information to Dana Erickson Building a media center that would supply computers for people to come and work, students to do homework, etc. in their search and rescue building. Similar to what Garfield City did.


Appendix D: Notes from Internet Service Provider Meetings

Beehive Broadband | June 20, 2023

Attendees:

- Cameron Francis (Beehive CEO)
- Larry Mason (Beehive Government Affairs)
- Greg Stevens (Beehive Tech guy)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

Beehive is currently updating its older copper (DSL) lines to fiber. Building fiber to additional new, unserved and underserved communities in adjacent areas. All fiber customers have 1 Gbps service available where backhaul transport will support it. Residents of Caineville, UT currently have Beehive fiber and the company is looking for ways to get increased backhaul transport to the area.

Most rural areas are "very high cost" per subscriber to build out. Some of the areas Beehive serves cost \$85,000 or more per subscriber to run fiber to the home. Beehive is an experienced rural Broadband provider. On average their rural/regulated customers average 1 per every 17.5 square miles.

In the past Beehive has been awarded several USDA, Rural Utility Service loans and grants to build fast fiber networks in rural Utah communities.

Beehive has built fiber to the home for the Confederated Tribes of the Goshute Reservation, which extends into Juab County.

Infowest | June 21, 2023

Attendees:

- Randy Cosby (Infowest COO)
- Kelly Nyberg (Infowest CEO)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

Want to install fiber to the home in their fixed wireless service areas Recently installed fiber to the home in Monroe, UT

South Central | June 21, 2023

Attendees:

- Kerry Alvey (South Central COO)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

Working on expanding to unserved areas that are connected to their current service areas and upgrading their existing DSL areas to fiber.

Obstacles:

- It takes a long time to obtain permits when building on federal lands and forest service lands. There are not enough people at the permitting agencies to approve permits in a timely manner. Sometimes takes 4 years to obtain forest service permits.
- Hwy 12 between Torrey, Ut and Boulder, Ut does not have electrical power. Residents in that section have requested service from them, but it would be a difficult project due to geography (plateau mountains), lack of power, and obtaining permits.

Lumen (Century Link) | June 13, 2023

Attendees:

- James Farr (Lumen Investment/Grants Director)
- Max Backlund (Lumen Government Affairs)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

In Utah, the company won FCC CAF II awards to build fiber to the node (FTTN) at speeds of at least 10/1. This program completed in 2021. For the FCC Rural Digital Opportunity Fund (RDOF), Lumen/CenturyLink did not receive any awards. However, Space Ex who won RDOF has defaulted and the RDOF areas should be available for BEAD grant funding. The company plans to evaluate potential projects to apply for BEAD grants to build FTTP in unserved and underserved areas, especially within its Incumbent Local Exchange Carrier (ILEC) service territory in Utah.

The company is interested in considering/evaluating potential broadband grants and partnership with local governments to expand FTTP.

Frontier | June 9, 2023

Attendees:

- Jack Phillips (Frontier)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

Company re-org 2 years ago Pricing (all speeds are symmetrical)

- 100Mbps \$30/month (free service for those who qualify for ACP)
- 500Mbps \$40/month
- 5Gbps \$150/month

Only installing fiber going forward

Company has pre-ordered installation materials to get ahead of shortages related to BEAD construction Currently only in Millard Co, plan to apply for funding in Millard. 1100 locations grant eligible

Senawave | June 12, 2023

Attendees:

- David Bradshaw (Senawave COO)
- Brad Olson (Senawave)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

Not currently in 6-County but is interested in providing service to Millard and Sanpete counties

Emery Telcom | June 9, 2023

Attendees:

- Rod Moore (Emery Telcom Grants)
- Jared Anderson (Emery Telcom COO)
- Brock Johansen (Emery Telcom CEO)
- Horrocks Engineers Jason Libert, Eleise Lowe

Meeting Summary:

Intend to apply for funding for unserved locations within their current service areas



Appendix E: Sample Specifications and Policies

SECTION 13553

ATMS CONDUIT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. ATMS conduit for communications and fiber optic cables.
- B. Detectable pull tape, conduit, and all materials, labor, workmanship, equipment, and incidental items required for a complete system of conduit.

1.2 RELATED SECTIONS

- A. Section 02056: Embankment, Borrow, and Backfill
- B. Section 02221: Remove Structures and Obstruction
- C. Section 02705: Pavement Cutting
- D. Section 02741: Hot Mix Asphalt (HMA)
- E. Section 02776: Concrete Sidewalk, Median Filler, and Flatwork
- F. Section 02842: Delineators
- G. Section 03575: Flowable Fill

1.3 **REFERENCES**

- A. ASTM D 2241: Poly-Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series)
- B. ASTM F 2160: Solid Wall High Density Polyethylene (HDPE) Conduit based on Controlled Outside Diameter (OD).
- C. National Electrical Code (NEC)
- D. National Electrical Manufacturers Association (NEMA)
- E. State of Utah Administrative Rules
- F. Underwriters Laboratories (UL)

ATMS Conduit 13553 – Page 1 of 10

2022 Standard Specifications Latest Revision: <u>February 22, 2018</u>

1.4 DEFINITIONS Not Used

1.5 SUBMITTALS

- A. Manufacturer's product data sheets and recommended installation instructions.
- B. Manufacturer's warranties and parts lists
- C. Conduit Mandrel Test Form prior to substantial completion.
- D. Refer to <u>http://www.udot.utah.gov/go/standardsreferences</u> for blank forms for this Section.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Conduit and fittings for ATMS communication and fiber optic conduit
 - 1. Schedule 40 PVC rated at 194 degrees F as specified in NEMA TC-2, NEMA TC-3, ASTM D 2241,
 - 2. High Density Polyethylene (HDPE) SDR11 rated complying with ASTM F 2160.
 - a. HDPE conduit with smooth outer wall and ribbed or smooth interior wall.
 - b. Fittings and couplers rated for a minimum of 130 psi.
 - c. Mechanical type couplers when joining HDPE and PVC conduits.
 - 3. Microduct
 - a. HDPE microduct with an outside/inside diameter of 0.500/0.394 inch (12.7/10 mm) or 0.630/0.512 inch (16/13 mm) or 0.709/0.551 (18/14 mm), as shown.
 - b. Microduct having a ribbed interior.
 - c. Watertight couplers rated for a minimum of 200 psi.
 - d. Microduct bundle within a single 0.100 inch thick polyethylene oversheath.
 - e. Microduct bundles must contain a factory installed #14 AWG solid, insulated locate wire and a minimum of two rip cords for removal of oversheath.
- B. Conduit Banks
 - 1. New, prefabricated
 - 2. ATMS Multi-duct Conduit Types
 - a. 1D = four 1.25-inch conduits

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- b. 2D = eight 1.25-inch conduits
- c. 4D = sixteen 1.25-inch conduits
- 3. Color-code each conduit or cell as follows:
 - a. One, two, or three conduits gray
 - b. 1D Bank 1 blue, orange, green and brown
 - c. 2D Bank 1 blue, orange, green, and brown Bank 2 slate, white, red, and black
 - d. 4D Bank 1 blue, orange, green, and brown Bank 2 slate, white, red, and black
 - Bank 3 same as bank 1 with a contrasting stripe
 - Bank 4 same as bank 2 with a contrasting stripe
- 4. Microduct types:
 - a. Individual 0.500/0.394 inch (12.7/10 mm) or 0.630/0.512 inch (16/13 mm) microducts installed loosely within new or existing conduit.
 - b. MD2, MD3, MD4 and MD7: microduct bundle containing two, three, four or seven 0.709/0.551 inch (18/14 mm) microducts respectively.
 - c. Factory-assembled bundles for bundled applications.
- 5. Color-code microducts and oversheaths as follows:
 - a. Individual microducts installed loosely within conduit or bundled within oversheath:
 - 1) blue
 - 2) orange
 - 3) green
 - 4) brown
 - 5) slate
 - 6) white
 - 7) red
 - 8) black
 - b. Oversheaths:
 - Bundle #1blueBundle #2orangeBundle #3greenBundle #4brown
- C. Meet or exceed all of the conduit manufacturer's recommendations for materials used in the installation of conduits including sweeps, adapters, couplings, glue, plugs, and fittings.
 - 1. Conduit plugs must seal the conduit and allow the secure fastening of detectable pull tape.
- D. PVC conduit sections Nominal 20 ft sections. Couplings and fittings must provide watertight integrity.

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- E. Sweeps factory manufactured sweeps (11¹/₄, 22¹/₂, 45, and 90 degree angles) complete with bell and spigot.
- F. Detectable Pull Tape flat profile, low stretch polyester, detectable, sequential footage marked, 1,200 lb tensile strength pull tape in each conduit.
- G. Backfill
 - 1. Flowable Fill Refer to Section 03575.
 - 2. Free Draining Granular Backfill Refer to Section 02056.
 - 3. Sand
 - a. Friable natural river or bank aggregate, free of loam, detrimental, or soluble or organic matter.
 - b. $3/_8$ inch minus, well graded.
 - 4. Hand-mix grout
 - a. Minimum strength 50 psi
 - b. Maximum strength 150 psi
 - c. Slump 5 inches to 10 inches
- H. Rigid Metal Conduit (RMC) complying with UL-6. Zinc galvanized exterior coating complying with ANSI C80.1.
- I. Liquidtight Flexible Metal Conduit (LFMC), -30 degrees C to 80 degrees C rated, UL 360 listed.
- J. Liquidtight Flexible Nonmetallic Conduit (LFNC), 80 degrees C dry, 60 degrees C wet rated, sunlight resistant, UL 1660 listed.

PART 3 EXECUTION

3.1 GENERAL

- A. Maximum spacing between junction boxes and vaults
 - 1. 500 ft for electrical cable.
 - 2. 1,000 ft for fiber optic cable on tangent surface street installations.
 - 3. 2,500 ft for fiber optic cable on tangent highway installations.
 - 4. Reduce maximum spacing if horizontal or vertical deflection incurred during installation prevents the installation of cable within maximum pulling tension rating of the cable.
 - 5. Notify the Engineer if utility avoidance requires junction box and conduit locations differing from requirements for deflection in this Section, article 3.2.

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- B. Minimum Cover of Conduit
 - 1. Minimum cover under pavement is 4ft and minimum cover under sidewalks is 3 ft.
 - 2. Minimum cover in highway right-of-way, greater than 20 ft from the edge of the pavement is 3 ft.
 - 3. Minimum cover in highway right-of-way, within 20 ft of the edge of the pavement is 5 ft.
 - 4. Refer to State of Utah Administrative Rule 930-7

3.2 INSTALLATION

- A. Prevent conduit from deflecting vertically or horizontally along its length by a ratio greater than 10:1, (no more than 4-inch deflection per 40 inch in length) when installing conduit that houses communication cable.
- B. Prevent sum total of the vertical and horizontal conduit deflection or bend between any two junction boxes from exceeding 270 degrees when installing conduit.
- C. Install conduit within 1 ft of existing parallel conduit run if the planned location of conduit is parallel to the existing traffic signal or ATMS conduit.
- D. Obtain approval for field bending of conduit with the Engineer in cases where factory sweeps are not appropriate. Field bending must be performed using a heat box or heat blanket. Torch heating conduit is prohibited. Install all conduit bends to have a radius that is not less than the following:
 - 1. 24 inches within the cabinet and pole foundations
 - 2. 36 inches in all other locations
 - 3. 46 inches for MD7 microduct bundle
 - 4. 40 inches for MD4 microduct bundle
 - 5. 36 inches for MD3 microduct bundle
 - 6. 32 inches for MD2 microduct bundle
 - 7. 12 inches for individual microduct
- E. Install conduits that cross finished curbs and gutters, sidewalks, concrete flatwork, or textured or decorative surfaces by boring, jacking, or drilling. Replace any damaged concrete sections, joint to joint. Refer to Section 02221.
- F. Proof all conduit before installation of cabling and detectable pull tape.
 - 1. Use a mandrel at least 80 percent of the conduit diameter, at least twice as long as the conduit diameter, and composed of rigid material.
 - 2. Schedule proofing with the Engineer at least 5 working days in advance of performing the work.

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- 3. Proof all conduit with a Department representative witness present.
- 4. Complete and submit a completed Conduit Mandrel Test Form for all ATMS conduit.
- 5. Proof microducts using proofing balls.
- 6. Proofing balls must maintain a minimum 80 percent fill ratio of inside diameter of the microduct being tested.
- 7. Proofing must occur after all junction boxes have been installed to final grade, including placement of flowable fill or hand-mix grout at junction box walls, and after all excavation in the immediate proximity of the conduit system has been completed.
 - a. Re-proof any conduit segment where excavation has occurred near the conduits following initial proof testing.
- G. Provide detectable pull tape in all conduits.
 - 1. Install continuously between junction boxes.
 - 2. Fasten securely to conduit plug and leave 6 ft of pull tape slack inside of the conduit.
 - 3. Do not splice detectable pull tape in conduit.
 - 4. Use flat profile, low stretch polyester, 1,200 lb tensile strength detectable pull tape that is sequential footage marked.
 - 5. Verify that the pull tape is detectable throughout its entire length by performing a continuity test or equivalent verification.
 - 6. Detectable pull tape not required in microducts.
- H. Encase open trench conduit in sand backfill covered by flowable fill within existing roadway, proposed roadway and sidewalk pavement areas only.
 - 1. Seal junction box wall around conduits using flowable fill or approved hand-mix grout.
 - 2. Use 6 inches of sand backfill covered with native material in all other areas.
 - 3. Refer to AT Series Standard Drawings.
- I. Use rigid metal conduit or schedule 80 PVC conduit for above ground application.
 - 1. Liquidtight flexible metal conduit (LFMC) or liquidtight flexible nonmetallic conduit (LFNC) is permitted in lengths not exceeding 6 ft where not subject to physical damage.
 - 2. Apply corrosion protection to any portion of rigid metal conduit buried in the ground or encased in concrete.
- J. Use PVC or HDPE conduit for underground application.
- K. Warning Tape
 - 1. Install orange warning tape with black legend "Caution Buried Communication Cable," in all trenches containing multi-duct conduit or conduit containing communication cables.

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- 2. Install red warning tape with black legend "Caution Buried Electric" in all other trenches.
- 3. Not required when flowable fill is directly overlaid with asphalt pavement or PCCP.
- 4. Not required when boring or plowing conduit.
- L. Install a bushing or adapter at ends of all conduits that contain a conductor according to the NEC.
- M. Furnish and install Utility Marker Posts along the longitudinal conduit running line. Refer to AT Series Standard Drawings and Section 02842.
- N. Install a #14 AWG solid, insulated locate wire inside of new or existing conduit with individual microducts.
 - 1. Verify that all locate wires are detectable throughout their entire length by performing a continuity test or equivalent verification.

3.3 TRENCH

- A. Paved Asphalt Surface
 - 1. Install T-patch over trenched area according to AT Series Standard Drawings.
 - 2. Cut pavement from roadway surface to roadway base on both sides of trench to provide a clean, straight wall for T-patch before any backhoe use according to Section 02705.
 - 3. Refer to AT Series Standard Drawings for depth of flowable fill under paved surfaces.
 - 4. Evenly apply tack coat on final backfill before installing T-patch.
 - 5. Place restoration patch match the composition, density, and elevation (\pm ¹/₄ inch), of the existing surface according to Section 02741.
 - 6. Apply a hot-pour rubberized asphalt joint sealant or approved equal after the patch is installed.
- B. Sidewalk or Decorative Pavement
 - 1. Use flowable fill to bottom of new pavement or sidewalk.
 - 2. Match existing pavement thickness. New pavement thickness must be 3½ inches minimum and 8 inches maximum.
 - 3. Restore sidewalk or decorative pavement to original condition or better after work is completed. Refer to Section 02776.
- C. Unpaved Surface
 - 1. Backfill using native material, if suitable, that matches the composition, density, and elevation (± 0.2 inch), of the existing surface according to Section 02056.

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- 2. Dispose of surplus material promptly.
- 3. Sand Backfill
 - a. Use sand backfill in trench sections outside of existing roadway, proposed roadway, and sidewalk pavement areas, including exposed conduit locations when plowing or boring.
 - b. Provide 6 inches of sand backfill above conduit in trench.
 - 1) Backfill trench above sand to finished grade using native material.
 - a) Backfill and tamp in 6 inch lifts.
 - c. Compaction of sand backfill is not required.
- D. Sleeve foreign utilities that cross a trench so they are not encased in flowable fill.
- E. Place all conduits in the same trench whenever possible.
- F. Flowable Fill or Hand-mix Grout
 - 1. Install flowable fill or approved hand-mix grout to the wall of junction box to seal conduit entry into junction box.
 - 2. Clean excess flowable fill or hand-mix grout from the inside of the junction box.
- G. Install all conduits so the flowable fill or sand backfill completely encases all exterior surfaces of the conduit.
 - 1. Separate multi-duct conduits using a commercially available conduit spacer or approved equivalent.
 - 2. Place spacers no more than 4 ft apart and not more than 2 ft from each coupler.
- H. Anchor the conduit in trench at 16 ft intervals to maintain the required conduit depth during flowable fill placement.
- I. Minimum separation between all conduits and the wall of the trench is $1\frac{1}{2}$ inches.

3.4 BORE OR PLOW

A. Immediately contain, remove, and properly dispose of all excess drilling fluid.

3.5 USE OF EXISTING OR OCCUPIED CONDUIT

- A. Maintain the physical condition and functional integrity of all cabling and wiring in existing or occupied conduit.
- B. Cable or wire installation in an existing or occupied conduit.

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- 1. Remove any existing fiber optic cable or copper wire.
- 2. Test the integrity and clean the conduit by successfully pulling a Department-approved mandrel through the conduit.
- 3. Re-pull existing and new fiber optic cable or copper wire together.
- 4. Perform all necessary splices and replace any impacted fiber cable and spider fan-out kits according to Section 13594.
- C. Use existing conduit in-situ only if shown and as approved by the Engineer.
- D. Intercept individual microducts from existing microduct bundle mid-span and reroute to new junction box location:
 - 1. Type II-PC junction box
 - a. Bury at existing microduct bundle depth.
 - b. Notch the 24-inch box walls and install junction box over existing microduct bundle.
 - c. Provide 12 inches of free draining granular backfill borrow underneath junction box.
 - d. Encase all conduit in flowable fill orhand-mix grout where the conduit enters the junction box.
 - e. Place locate ball or disk in junction box.
 - f. Ground rod, and grout floor are not required.
 - 2. Conduit and microduct bundle inside of buried Type II-PC junction box.
 - Install conduit from buried junction box to new junction box location for rerouting of individual microducts. Provide #14 AWG solid, insulated locate wire inside of new conduit between junction boxes.
 - b. Extend conduit and microduct oversheath 6 inches beyond inside wall of the junction box.
 - c. Expose microducts by removing no more than 20 inches of oversheath.
 - d. Identify and cut only the individual microducts to be rerouted.
 - e. Use approved couplers and extend microducts to new junction box using corresponding microduct color.
 - f. Splice all locate wires together using an approved waterproof connector.
 - 1) Verify that the locate wire conductors are not exposed.
 - 3. New junction box location
 - a. Install new junction box within 20 ft of buried junction box or within 20 ft of edge of roadway when existing microduct bundle is underneath roadway, to provide access to locate wire for mapping and locating purposes.

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3.6 REPAIR OR RESTORATION

- A. Restore all areas, including landscaping, concrete pavement, asphalt, finished curbs and gutters, box culverts, sewers, underground water mains, sprinkler systems, sidewalks, concrete flatwork, colored, textured, or decorative surfaces damaged during conduit and junction box installation.
- B. Coordinate with local utilities for utility repair.
- C. Notify the Engineer of all necessary repairs.
- D. Replace all damaged facilities in kind.
- E. Buried microduct bundle coupling and repair:
 - 1. Expose microducts by removing no more than 12 inches of oversheath beyond area to be coupled or repaired.
 - a. Trim microducts to length as necessary to eliminate all bends and deflection.
 - 2. Use approved couplers.
 - 3. Splice the locate wires together using an approved waterproof connector.
 - a. Verify that the locate wire conductors are not exposed.
 - 4. Protect exposed microducts, couplers and locate wire using split duct.
 - a. Seal split duct joints and split duct ends around microduct bundle oversheath using approved waterproof sealing tape or other approved methods prior to backfill.
 - b. Do not use heat-shrink or cold-shrink protection methods.

END OF SECTION



JJACENT TO ONE ANOTHER.	ON BOXES WITH A SPLIT LID. SPECIFICATION FOR UNDERGROUND ENCLOSURE FOR ALL JUNCTION BOXES. TIER 22 ID PLATE TO BE IMUM OF 4 INCHES AND A MAXIMUM OF 6 INCHES ABOVE TING BRIDGE CLAMP FOR BONDING TO GROUND ROD. TRES PER CLAMP. CONCRETE COLLARS LEVEL WITH GRADE ON TER TO PLANS FOR DETAILS OF JUNCTION S STEEPER THAN 6:1. SLOPE CONCRETE COLLAR S STEEPER THAN 6:1. SLOPE CONCRETE COLLAR	WITH BOTH SURFACES WITH BOTH SURFACES WITH BOTH SURFACES WITH BOTH SURFACES WITH BOTH SURFACES FLUSH WITH CONCRETE FAVED AREAS. STANDARD SPECIFICATION 13554. R ON EACH SIDE OF THE JUNCTION BOX.
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	JUNCTION BOX DETAILS STANDARD DRAWING TITLE	STANDARD DRAWING EDITION 2024 Standard Drawing 4/30/20 MAA ADDED "OPTIONAL" TO CONCRETE COLLAR DETAIL NO. DATE APPR. REMARKS



STD DWG NO

STANDARD

AT 7B

RN OR SIMILAR SURFACE. CK SYSTEM. PROVIDE RACK ARMS AND STANCHIONS VCKS, INCLUDE A MINMUM OF 36 INCH RACK STANCHIONS HACK STANCHIONS AND 5 RACK ARMS. HOLE IN THIN WALL SECTION TO CONDUIT SIZE PER NEC 250 IF ARMORED FIBER OPTIC CABLE IS USED. "PER NEC 250 IF ARMORED FIBER OPTIC CABLE IS USED.	ID FOR TYPE IV-CV FIBER VAULT	SPRING ASSISTED LID PANELS (2) BOLT DOWN SPLIT LID. SEE NOTE 6	FINAL GRADE FLOWABLE FILL OR APPROVED HAND-MIX GROUT TO EDGE OF TRENCH. REFER TO STANDARD SPECIFICATION 13553. REFER TO STANDARD DWG AT 6 FOR CONDUIT SPACING. ALL CONDUIT SPACING. ALL CONDUIT TO ENTER VAULT AT THIN WALL SECTIONS ONLY
PRECAST CONCRETE	UTAH DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION SALT LAKE CITY, UTAH		
UTILITY VAULT DETAILS	STANDARD DRAWING EDITION		
	2024 Standard Drawing		
IDARD DRAWING TITLE		NO. DATE APPR.	REMARKS



Dig Once Best Practices Overview

SECTION 1: GOALS OF THE LEGISLATION

Economic Viability Exists in a Digital Connection

No one can predict the demand for data in the next 10 to 20 years, but we know our lives are going to be even more connected. By consolidating the installation of broadband infrastructure at the time of road construction, communities are positioned to participate in the digital economy in the most cost-effective way for the taxpayers.

Saving Tax-Payers Dollars

The U.S. DOT's Intelligent Transportation Systems Joint Program Office estimates the average cost of deploying fiber-optic cable is about \$27,000 per mile. According to the Federal Highway Administration, the Dig Once legislation has the potential to eliminate up to 90 percent of the cost of deployment.

Dig Once U.S. Federal Legislation

In an effort to make high speed broadband more affordable and accessible, the U.S. Federal Government passed "Dig Once" legislation. After a decade of various versions of the concept, the bill received overwhelming bi-partisan support with more than 30 co-sponsors.

Eliminating Duplicate Expenses

Essentially, the legislation provides for the notification of federally funded road construction projects where conduit or fiber could be included at the same time. Digging one time for two or more projects and enabling future upgrades without additional expense brings tremendous added value and efficient use of resources.

Digging Deeper into Saving Taxpayer's Money

The law allows for some flexibility: installation of fiber, conduit, or both fiber and conduit. If fiber is direct buried alone, it will still be a leap forward in streamlining and investing in broadband infrastructure. However, when an upgrade is needed, it eventually means more digging to replace the fiber cable.

The Federal Communications Commission, or FCC, recommended State policies should require contractors to install spare fiber and empty conduit to accommodate "reasonably anticipated" future demand. The use of a conduit network system provides the flexibility of upgrading (adding additional fiber) without the cost of digging. Fiber can be placed by airjetting into the conduit quickly and easily without the expense and disruption of construction. Burying empty conduits in the ground at the time of road construction allows the potential for expansion when it is necessary and can be immediately revenue-generating by leasing or renting.

SECTION 2: BEST PRACTICES OF DIG ONCE POLICIES

The law allows for some flexibility: installation of fiber, conduit, or both fiber and conduit. The Federal Communications Commission, or FCC, recommended State policies should require contractors to install spare fiber and empty conduit to accommodate "reasonably anticipated" future demand.

Best Practice #1: Education

- The extra effort spent on educating the stakeholders will result in on-going cooperation
- Explain the cost-savings benefits
- Demonstrate the high-speed broadband connectivity economic impact
- Clarify the definition of "reasonably anticipated" future demand in conjunction with the installation of fiber, conduit, or both fiber and conduit
- Describe the ability to upgrade for the future (if conduit is used)

Best Practice #2: Ordinances (see pages 3-9: <u>https://broadbandnow.com/report/dig-once-digital-divide/</u>)

- Use existing laws and practices and integrate ideas into statutes and processes
- Explain expectations for compliance and how to cope with expectations
- Underscore who is responsible in the text of ordinance
- Encourage or require companies to use your conduit
- Maintain public ownership of conduit as much as possible

Best Practice #3: Coordination

- Establish relationships and expectations by keeping track of private projects and streamlining bureaucratic systems
- Create effective coordination committees
- Provide clear explanation of costs
- Line up departments' budgets for potential large projects

Best Practice #4: Installation of Conduit Network Systems (see pages 10-13)

- Create a master plan
- Publish clear and consistent guidelines (with engineering standards)
- Choose the type of conduit that makes sense for your community plan for the future
- Do not underestimate the added value of MicroTechnology and MicroTrenching (Note: MicroTrenching is different than NanoTrenching, which puts the conduit only a few inches below the surface and is unproven. MicroTrenching has been around 10+ years and is a proven installation method with the correct reinstatement material.)
- Document and verify your conduit

NOTE: Incremental funding required to pass 90 percent of U.S. households with high-speed fiber broadband by 2025 is estimated at a cost of \$70 billion.* Dig Once has the potential to reduce that expense significantly. (*Source: Cartesian, FCC Form 477, US Census, American Community Survey, Company Presentations)

SECTION 3: STATE LEGISLATION EXAMPLES

(SOURCE: <u>https://broadbandnow.com/report/dig-once-digital-divide/</u>)

NORTH CAROLINA

Law(s): Executive Order 91 forming the Task Force on Connecting North Carolina Date enacted: 2019

Description: The Governor of North Carolina formed the <u>Task Force on Connecting North</u> <u>Carolina</u> in March 2019, aimed at increasing Internet access to North Carolina residents and aligning state agencies policies in order to remove barriers to broadband deployment. It's comprised of officials representing an array of state departments, including the department of transportation (DOT) and the department of information technology (DIT). The governor asked representatives from the DOT and DIT to jointly develop and implement a statewide "Dig Once" policy promoting the installation of broadband conduit or cables during road construction projects by July 1st, 2019.

<u>UTAH</u>

Law(s): <u>R907-64</u>. Longitudinal and Wireless Access to Interstate System Rights-of-Way for Installation of Telecommunication Facilities; Section 72-7-108

Date enacted: 1999

Description: Utah's state government began implementing Dig Once policies ahead of the 2002 Salt Lake City Olympics. The state's DOT has since expanded the policy, requiring the installation of oversized conduit for certain road construction projects, while interested telecom parties can then extend that infrastructure to neighboring communities. The state's DOT owns the conduit and leases it to telecom companies that want to use it. The state's <u>Telecommunications Advisory Council</u> reviews and approves valuations and trades between the state's DOT and telecom companies for access to conduit, and maintains a map of fiber locations.

ARIZONA

Law(s): Arizona REV. STAT. ANN. § 28-7381

Date enacted: 2012

Description: Arizona's Dig Once policies are targeted specifically at expanding broadband access to rural communities. The policy states that during road construction projects along rural highways, the DOT can coordinate with telecom companies to install conduit and **it** enables the agency to lease the conduit to telecom providers at a cost-based rate.

MINNESOTA

Law(s): <u>116J.39-116J.40</u>: Coordination of Broadband Infrastructure Development Date enacted: 2013

Description: Minnesota's state laws encourage the state's Office of Broadband Development to coordinate with the state's DOT for "Dig Once" measures in planning, relocation, installation, or improving broadband conduit within a right-of-way. It enables the Office of Broadband Development to evaluate procedures and criteria for contracts or lease agreements with telecom companies, as well as pricing requirements. It also allows for colocation of fiber and conduit with other utilities in the same trench.

NEVADA

Law(s): <u>SB 53, creating the Nevada Telecommunications Advisory Council</u> Date enacted: 2017

Description: Nevada state legislature formed the <u>Telecommunications Advisory Council</u> within the state's DOT in 2017, outlining parameters and regulations for the DOT in coordinating with telecom companies for access to rights-of-way for installing telecommunications equipment. The law charges the council with seeking input from telecommunications providers and the public relating to broadband access, providing recommendations to the state DOT on offering access to rights-of-way to telecommunications providers, as well as approving or denying proposed fiber trade agreements between the DOT and a telecom provider. The DOT is also authorized to enter into agreements with telecom companies and charge fees to access to public rights-of-way or receive in-kind compensation.

MARYLAND

Law(s): <u>SB 717 – Connecting Rural Maryland Act of 2017</u>, creating the Task Force on Rural Internet, Broadband, Wireless, and Cellular Service; <u>HB 961-Rural Broadband Communication</u> <u>Services</u>

Date enacted: 2017-present

Description: Maryland's DOT coordinates with telecom providers and local utilities for installing conduit. The Connecting Rural Maryland Act created the Task Force on Rural Internet, Broadband, Wireless and Cellular Service, which was charged with facilitating cooperation between telecom providers to reduce redundancy, save money, and ensure that the all fiber assets are being used efficiently. The task force focused on facilitating cooperation between electric cooperatives and telecom companies. The task force's last report recommended the state include fiber optic cable as part of the state's definition of telecommunications equipment, and that it allow utilities to lease excess fiber and/or pole attachment rights for telecommunications, including broadband, without obtaining a separate easement, in order to promote broadband access in rural parts of the state. It has requested that the state's legislature draft authority for electric cooperatives to coordinate with telecom providers in laying fiber. That bill was expected to be introduced in 2019. HB 961, meanwhile, specifies that nonprofit telecommunications services providers in rural and underserved areas of the State must be allowed to use the right-of-way or easement of specified State agencies for the installation of broadband communication infrastructure without being charged to do so.

GEORGIA

Law(s): <u>SB 402 – Achieving Connectivity Everywhere (ACE) Act</u>

Date enacted: 2018

Description: Georgia state legislature passed the ACE bill in 2018, which enables the state DOT to develop and implement a long-term policy allowing public rights-of-way to be used for the deployment of broadband services and other "emerging communication technologies" either by the state or private providers. It also requires local governments' comprehensive plans to include elements to facilitate the deployment of broadband services, and it amends the <u>OneGeorgia Authority Act</u> to include broadband services. Finally, the bill authorizes the <u>Georgia Technology Authority</u> to establish policies and programs necessary to coordinate

statewide efforts to promote broadband deployments between state agencies, local governments and industry representatives.

WEST VIRGINIA

Law(s): <u>HB 4447, creating new codes §17 – 2 E- 1-E-9</u> Date enacted: 2018

Description: West Virginia's state government has developed a uniform system for conduit installation for telecom companies that are applying to install telecom infrastructure. Telecom companies must enter into an agreement with the state's Division of Highways for installing conduit in public rights-of-way; companies must also notify the West Virginia Broadband Enhancement Council and all other carriers on record within the state of their installation permit. Other telecom companies that are interested in installing their own fiber have 30 days to notify the applicant of interest in sharing the trench. The telecom company is also required to run an advertisement in the relevant media for two weeks advertising the project to allow other carriers the opportunity to respond. The law also allows the Division of Highways to charge fees for access to public rights-of-way, or accept in-kind compensation from sources such as conduit, dark fiber, access points, other telecom equipment or services, or even bandwidth.

<u>MAINE</u>

Law(s): <u>Chapter 344, Sec. 1. 35-A MRSA §2503, sub-§2</u> Date enacted: 2018

Description: Maine's law requires any public entity involved in a construction project to install broadband conduit and authorizes that entity to lease the conduit to telecom companies for installing broadband and/or wireless facilities for the purpose of providing service. The law states that telecom companies proposing broadband deployments must notify the <u>ConnectME Authority</u> with the location and description of the proposed facility and that the Authority must then disseminate that information to all other telecom companies or other entities that may be interested in installing broadband at the same time. The Authority is also tasked with maintaining a map of broadband conduit installations through the state.

ILLINOIS

Law(s): 605 ILCS 5/9-131) Sec. 9-131.

Date enacted: 2009

Description: Illinois state law requires the state DOT and the Department of Central Management Services (DCMS) to collaborate in installing fiber network conduit, where it does not already exist, in every new state-funded construction project that opens trenches along state-owned roadways. Either department is authorized to allow a third-party company to manage the leasing of the conduit to telecom companies, as long as the state can receive market-based pricing for the lease. The state's DOT also coordinates with the Illinois Broadband Deployment Council to compile Dig Once best practices and draft ordinances for county and city agencies within the state.

CALIFORNIA

Law(s): <u>Section 14051 of the Government Code</u> Date enacted: 2016

Description: California requires the state DOT to notify telecom companies of state-led highway construction projects through its website to enable companies to collaborate with the state on installing conduit in public rights-of-way during each project.

<u>SECTION 4: CITY AND COUNTY LEGISLATIONS EXAMPLES</u> (SOURCE: <u>https://broadbandnow.com/report/dig-once-digital-divide/</u>)

LOMA LINDA, CA

Law: <u>Ord. 629 §1</u> Date enacted: 2004

Description: The city of Loma Linda requires all new construction to connect to the city's existing fiber network through ordinances laid out in their Loma Linda Connected Community Program. Residential and commercial builders in Loma Linda are required to include broadband-capable internal wiring and fiber-optic interfaces in new structures. Loma Linda was one of the first communities in the US to adopt a comprehensive future-facing dig once construction policy, and one of the only ones to extend the ordinance to building wiring specifications.

BRENTWOOD, CA

Law: Ordinance No. 609

Date enacted: 1999

Description: Brentwood began implementing Dig Once policies 20 years ago. The city requires developers to design and install two advanced technology system conduits dedicated to the city within public rights-of-way during new construction and to each lot line within the development. It goes on to require developers to install a fiber optic system in one of the two conduits designed to serve the development by either the city itself or a licensed franchisee. The second conduit must remain empty and is reserved for future use by other franchisees. Over the last 20 years, the city now has 150 miles of conduit passing over 8,000 homes. ISP Sonic.net has relied heavily on the conduit to provide broadband service to residents.

SANDY, OR

Law: Development code 17.84.60

Description: The city of Sandy requires private developers to install conduit when disturbing existing roads or building new ones and offers maps of existing installations so that developers can be strategic in how they install conduit. The city has added broadband fiber to the list of municipal infrastructures (such as water, sewer, power lines and mailboxes) that all new developments must include.

BOSTON, MA

Date enacted: 1998; expansion in 1994

Description: Boston is possibly the very first city to implement a Dig Once policy, back in 1988. Initially, the city required all construction projects that involved excavators in a public right-of-way to install conduit and the city then leased that conduit to telecom companies through a one-time fee plus a \$5 per foot annual charge. However, the city found its offering wasn't attractive enough to telecom companies, who had begun building their own conduit along parallel streets. The city has since revised its laws to require telecom companies to lease space from the installed conduit before being allowed to install their own conduit, thereby encouraging companies to make use of what's already been installed. In 1994, Boston implemented a policy that required all telecom companies to install conduits in the same trench at the same time, on a shared-cost basis. This policy requires a lead company to

coordinate with other telecom entities in drafting engineering plans and estimating costs for the trenching and conduit installation.

BERKELEY, CA

Law: Ord. 7083-NS § 4 (part) Excavations for video and telecommunications systems Date enacted: 2009

Description: Berkeley has implemented a suite of policies and procedures outlining best practices for telecom companies in order to minimize the inconveniences of installation, maintenance, and removal of telecom facilities in public rights-of-way. The city requires existing facilities be moved underground alongside new facilities when feasible, and that telecom companies coordinate construction projects with utilities installing infrastructure in public rights-of-way. Telecom companies must also alert the city to any excess or surplus conduit to be installed, and that new facilities be installed within existing facilities where there is sufficient excess capacity.

BELLEVUE, WA

Description: The city of Bellevue doesn't have a formal Dig Once policy in place, but the city has set Dig Once conditions within some of its development projects in the past. The city asks excavator projects include installing conduit along roads when feasible, as well as during street lighting and traffic signal upgrades. It also requires transportation projects that interrupt public sidewalks to include installed conduit.

GONZALES, CA

Law: "Dig Once" Policy for Public Works Projects in Gonzales

Date enacted: 2016

Description: Gonzales city government has implemented a Dig Once policy for public works projects that requires the city to install conduit during projects such as construction and maintenance of utility infrastructure or public roadways, or during excavations for installing communications, in public rights-of-way. The conduit is owned by the city.

ARLINGTON COUNTY, VA

Description: Arlington County does not have a specific Dig Once policy, but the county has reached "Dig Once" agreements with utility providers in the past. The county entered into one such agreement with electric utility Dominion Virginia Power. The utility needed to install underground conduit along a congested urban public right-of-way. The county required the utility to install fiber in parallel conduit for the county's use. The county is in the midst of installing a fiber network and is building extra capacity for use at a later date.

SAN FRANCISCO, CA

Law: Ordinance 220-14

Date enacted: 2014

Description: San Francisco laws requires any government-led construction project involving a public right-of-way to include improvements to communications infrastructure when feasible. It also requires a telecom company applying to install communications infrastructure to notify the city's Department of Technology so the department can participate in installing conduit at

the same time. The law encourages the department to participate to create a more efficient delivery of broadband services to the public and for the city's needs.

MONTEREY, CA

Law: MBEP/CCBC Shadow Conduit Specifications version 1.0

Date enacted: 2016

Description: The city of Monterey and the Central Coast Broadband Consortium (CCBC) have developed a set of conduit specifications and guidelines for reducing redundancy in installation. Its recommendations range from the conduit size and number of conduits to install, whether future conduit installation would be problematic or impossible, and whether any partners or customers will make immediate use of it. However, the specifications leave out guidance on when conduit installation is required and who should be required to install it.

<u>SANTA CRUZ, CA</u>

Law: Telecommunications Improvement Ordinance

Date enacted: 2014

Description: The city of Santa Cruz, also part of the Central Coast Broadband Consortium (CCBC), adopted the <u>Santa Cruz county's ordinance</u> in 2014, which in turn, was based on the city of San Francisco's Dig One policy. It requires that any entity proposing construction projects in public rights-of-way for utility improvements also install conduit or other telecommunications equipment when practical and feasible. City staff will work with contractors to identify the most cost-effective approach to installing conduit to meet the city requirements and will notify and coordinate with other telecom companies to join the project.

SAN BENITO COUNTY, CA

Law: Multi-use streets policy

Date enacted: 2015

Description: San Benito County, part of the CCBC, implemented a Dig Once practice as part of its multi-use streets policy. It requires county roadway construction projects to include installation of underground utility conduit. The county, which is part of a municipal broadband network, can then use the conduit to expand the network. The county may also utilize the CCBC's shadow conduit policy, which recommends trenching digging projects include a 60-day window so other telecom or utility providers who may be interested in installing conduit at the same time may be notified. The county encourages local jurisdictions to adopt similar policies.

CHICAGO, IL

Description: The City of Chicago has created a specific office that handles coordinating construction projects across agencies and companies to minimize disruptions to the public. The Project Coordination Office, within the city's DOT, was formed in 2012 at the direction of Mayor Rahm Emanuel to <u>coordinate projects within public rights-of-way</u> between different service providers and utilities. In 2013, the mayor expanded the scope of the office to <u>include telecommunications</u>. The office has helped the city save an estimated \$150 million in construction costs since 2012.

<u>CELINA, TX</u>

Law: <u>Subdivision Ordinance</u>; <u>Division 4</u>. <u>Design Standards</u>; <u>Section 10.03.126</u>: <u>Improvements</u>; <u>Subsection 10.03.126(i)</u>

Date enacted: 2017

Description: The city of Celina has adopted a conduit ordinance that requires any city-led or developer-led construction project that includes underground excavation to install conduit and fiber-optic cable at the same time to accommodate future telecommunications uses. Private developers must pay for the conduit installation, which then becomes the property of the city. The city also requires that telecom companies looking to install fiber make use of the city's fiber assets when available first and pay fees to the city for access to the infrastructure.

MOUNT VERNON, WA

Law: <u>Municipal code 12.20.015</u> Construction standards for the regulation of use of public rights-of-way and public property.

Date enacted: 1999

Description: Mount Vernon requires private developers to install conduit when engaging in construction projects that either disturb existing roads or create new roads. The city maintains maps of conduit installations so developers can strategically place the conduit.

EL DORADO COUNTY, CA

Law: Broadband Infrastructure Installation Policy

Date enacted: 2018

Description: El Dorado County adopted a conduit installation requirement for capital improvement projects. The policy requires construction projects from the county's Department of Transportation, the Facilities Division and the Parks, Trails and Rivers Division to include installing conduit when digging trenches or excavating underground as part of the construction.

HUMBOLDT COUNTY, CA

Law: General Plan

Date enacted: 2017

Description: Humboldt county's 2017 updated general plan includes provisions to expand broadband access that include implementing Dig Once policies. The plan recommends that new residential and commercial development projects include requiring developers to install conduit within joint utility trenches for future telecommunications use. It also recommends flexibility in conduit placement requirements in order to allow for retrofitting of communications systems.

POULSBO, WA

Law: 12.02.010 Construction and development standards

Date enacted: 2003

Description: Poulsbo requires any new public street construction, by either the city or a private developer, to include the installation of conduit that can accommodate two telecom companies' fiber infrastructures. The law requires that the conduit be dedicated to the city upon completion and any telecom company looking to deploy infrastructure must first lease conduit space from the city if available.

SECTION 5: CONDUIT NETWORK SYSTEMS

A well-engineered plan will ensure the application can achieve benefits well in excess of the costs of the plan and the conduit network system deployment. Generally, the actual cost of the conduit network systems is only approximately three percent of the overall project costs. Conduit is widely used in most industries, accommodating simpler initial installations and providing a Dig Once permanent pathway.

It is common for cables to be buried in ducts to provide further protection, allowing for simple repair, and potentially providing upgrade paths. In some circumstances, ducts are only used for sections of deployment (e.g. under roads or rivers) where excavation would pose a difficulty, but increasingly ducts are being used for the entire route. This is possible because conduits can provide several benefits without a significant project cost impact.

Brief History of Conduit Network Systems

In the early to mid-1980s, tremendous growth occurred in the deployment of fiber optic cables, linking major metropolitan areas. Fiber optic cables were quickly becoming the technology of choice for streaming huge amounts of voice, video, and data. These cables were installed in very long lengths, up to 30,000 feet, with the goal of using as few splice points as possible to minimize signal attenuation. Because of the more fragile qualities of these long, thin strings of glass, individually no thicker than a strand of human hair, they needed more protection and different handling procedures than traditional jacketed metallic cables. There was an immediate need for a conduit system that offers improved installation efficiencies and cable protection.

Existing conduit network systems typically were 3.5 inches to 6 inches in diameter to accommodate the very large diameter of copper cables that filled the duct banks. As copper cables were being replaced with fiber optic cables, which are much smaller in diameter, smaller high-density polyethylene (HDPE) conduits ranging from 1 inch to 1.25 inches were pulled into the vacated conduit creating multiple pathways to be used for initial and future fiber optic cable placement and for redundancies if a cable got damaged.

This new method of deployment using MicroDucts in existing pathways was called "innerducts" and is still used today. Additionally, now conduit suppliers offer bundled MicroDucts under one oversheath for ease of placement and to maximize fiber count in limited underground and aerial spaces. Multiple variations of standard HDPE conduit and bundled HDPE MicroDucts are available. The installation methods and tools are the same for both.

In addition to traditional trenching, over the years newer installation methods also evolved to minimize the above and below ground surface damage, restoration requirements, and disruption to traffic: plowing, horizontal directional drilling (HDD), and MicroTrenching.

In 1999, new technology was introduced to help solve the issue of overcrowded right-of-ways. Using the same installation methods and tools as traditional HDPE standard conduit, bundled MicroDucts under one oversheath maximized the fiber count in the same space. As technology advances, fiber optic cables are higher capacity in a smaller size, called MicroCables, and conduits are following in size, called MicroDucts. Multiple configurations allow for easy connection to existing networks and efficient transition to current technology.

All conduit is not created equal, and the type of conduit can determine which type of fiber cable you need. Conduit has an inner diameter (ID) and an outer diameter (OD); the standard is to refer to the outer diameter when describing the conduit. A common engineering practice is to not fill each conduit subduct more than about 65 percent full of fiber cables. This space is necessary to air-jet, or pull, the fiber through the conduit without damaging the fiber.

As fiber technology continues to evolve, the fiber cable diameter will continue to get smaller. Microfiber cables can fit many strands of fiber in small diameter conduit. MicroTechnology continues to improve. For decades, conduit has been the preferred manner of installing fiber cable underground and now even in aerial applications.

Installation Advantages

It is easier to install, as it can be put in section-by-section between access points, with the fiber cable later air-assisted and pushed or pulled in as a continuous run.

It is also easier to handle unexpected changes in the route, such as having to go around an obstacle, as compared to directly placing fiber cable.

The continuous run of fiber cable can help reduce the cost of splice points and improve the fiber loss budget and performance for the total system.

The conduit itself can be locatable, which allows the fiber cable to be constructed with only non-conductive dielectric materials which can allow easier access to the fibers.

Protection of the Fiber

The conduit provides mechanical protection of the fiber cable, both during installation of the fiber cable and over the entire life of the fiber cable.

Typically, direct buried fiber cables require additional design enhancements to withstand environmental conditions, whereas the conduit can provide that environmental, tensile and crush protection itself. This enables the fiber density to increase significantly for a given outer diameter cable.

Permanent Pathways

Conduit provides for an always-present pathway for upgrades and changes whenever needed. For example:

- 1. Remove and change out a fiber cable that is damaged
- 2. Swap out with improved technology
- 3. Use the additional empty conduits for increasing capacity
- 4. Re-route the conduit pathway if there is a change in route

The Dig Once legislation stresses the importance of burying conduit once, with the possibility to add new cables, upgrade existing ones, and increasing capacity. By planning for the future by installing extra permanent pathways, the networks are able to adapt to changes more quickly.

Communication Needs

Communication needs could be for telecommunications, cameras, data transfer, security and many others.

Revenue Opportunity

There is a financial opportunity that network and right-of-way owners are realizing and planning whereby empty pathways can be used, to grant access to difficult right-of-ways or be leased to carriers.

By installing multiple MicroDucts, take full advantage of the new high-density MicroCables that fiber cable providers are shrinking and improving year over year.

It is important to realize that there are different types of conduits suited for different purposes:

- In a more traditional system, 1, 2, or 3 standard conduits could be installed together. However, the outside diameter of these conventional ducts is often quite large compared to the smaller outer diameter of MicroDucts now available. While these large dimensions, perhaps 1.5 inches or 2 inches in diameter, are still used in the industry, they were developed at a time when fiber cables were of much larger diameter with lower fiber density. Since typically only one cable is placed per duct, they actually limit the number of fiber cables that can be placed in a right-of-way.
- Smaller diameter MicroDucts are designed to take advantage of the advances the higher fiber density MicroCables that have much smaller outer diameter. Amazingly, there are 288 and 432 fiber cable diameters on the market on the order of 8 to 10mm, so by sizing the MicroDucts for better space utilization, you can achieve much greater overall fiber density in any right-of-way space.

SECTION 6: ADDED VALUE OF FIBER OPTIC SENSING OPPORTUNITIES

Distributed Acoustic Sensing in Conduit

Optical fiber sensing (FOS) interrogator companies have been installing commercial sensing system in conduit of many years. Information from several market leading companies has indicated that as approximately 50 percent of sensing systems are comprised of fiber cables installed within conduit pathways. The reasons for doing this included conduit pathways provide tremendous added protection, easier installation, flexibility for changes, repairs, and technology upgrades, as well as added capacity for additional use and monetization. When it comes to distributed acoustic sensing, however, an additional reason is that commercially sensitive systems work extremely well in conduit. FOS use is increasing in many vertical markets, with new applications and use cases growing with experience. The following presents an overview of common applications and finding relative to sensing using the advantages of conduit.

Predominant Vertical Markets

- The Security and Asset Integrity Market
- The Pipeline Market
- Emerging Smart City applications

Monitor Assets

- Manual excavation (perimeter security)
- People walking
- Traffic flow
- Leak prevention (oil and gas line)

Research Shows

- Standard telecom-grade fiber is well suited for DAS installations
- Cable design specifically engineered for FOS purposes does impact DAS performance
- For current commercial quality Fiber Optic Sensing systems, there is a negligible difference between performance of a cable in a duct and a cable not in a duct. The protection and advantage the conduit offers far outweighs any difference in signal sensitivity in most all commercial cases.
- The cable to conduit fill-ratio should be considered when selecting a conduit and cable mix, in that an overly large conduit with too much air gap may impact performance. The conduit can be sized for both easily installation through jetting or pulling into the conduit, with sensing consideration also accommodated.
- Typical cable Installed in conduit: Gel-filled, loose tube, unarmored

About Dura-Line

At Dura-Line we aspire to a more connected world, because we believe every company, every community, every person deserves the chance to advance their lives through better access to high-speed broadband. Strengthening our fiber optic network and conduit system infrastructure is critical to supporting the next wave of digitization. And, Dura-Line is at the forefront of the industry creating strategic solutions that solve the issue of the unpredictable needs of tomorrow's fiber cable requirements.

As a TL 9000 and ISO 9001 rated manufacturer, Dura-Line takes pride in our state-of-the-art quality products and being recognized a key partner with all of the major telecommunications companies across the world. In one year, Dura-Line produced over 1.4 billion feet of digital network infrastructure. Through our innovative product solutions and unparalleled customer insight, we are the ones who enable the physical build-out of this new technology realm that impacts education, healthcare, agriculture, energy, transportation, industry, and more.

SILICORE™

Several advanced manufacturing techniques set Dura-line apart as an industry-leader, including low friction SILICORE[™] permanently lubricated lining. SILICORE[™] is proven to reduce installation time, thus reducing installation costs.

Advantages of Dura-Line's FuturePath (multi-bundled MicroDuct conduit)

Dura-Line manufactures FuturePath, which are smaller MicroDucts are packaged together under one sheath. There are combinations of FuturePath all the way from 2-MicroDucts, under a single sheath to 24-MicroDucts under a single sheath. Other configurations have mixed sizes of MicroDucts and standard conduit to accommodate both smaller and larger diameter cables.

Dura-Line's FuturePath HDPE Product Line is Sustainable

- Supports Dig Once initiatives
- Saves space in overcrowded right-of-ways
- Requires fewer and smaller handholes
- Reduces manpower and machine power for installation
- Reduces fuel consumption, gas emissions, and lower material handling requirements
- Lessens soil displacement Environmental Benefits of HDPE
- Non-leaching
- Flexible, non-rusting materials minimizes leaks common in corroded steel pathways
- Resin and pipe have a superior resistance to failure, corrosion, tuberculation, deposits, and rapid crack propagation (RCP)
- Modern manufacturing methods allow for hundreds, or even thousands, of feet of continuous extrusion, which results in fewer joints
- High performance in extreme temperatures, which greatly reduces compromised pathways Reduced transportation, handling, and installation due to quick installation with less heavy machinery which reduces fuel and labor usage as well as ground disturbance when compared with installation of steel counterparts

- Joints typically use a mechanical coupler, rather than a glue-based solvent which gives off noxious fumes
- Fewer and smaller handholes required
- Low lifecycle costs
- Useful life of HDPE is estimated at 50+ years
- Studies have shown that HDPE can withstand scratching and gouging up to 10-20 percent with no detrimental effects to the long-term performance of the pipe
- Versatility of design allows for multiple applications in several industries





Appendix F: Outreach Collateral

Collateral created and distributed as part of the local broadband planning outreach is included here.



CONNECTING UTAH OUTREACH PACKAGE

FLYER

<u>Six County Overview Flyer</u>

GRAPHICS

- Social Media Survey Graphic
 - o <u>Facebook</u>
 - o <u>Instagram</u>
 - o <u>Twitter</u>

SOCIAL MEDIA SAMPLE POSTS

Shareable Social Media Post #1Channel Suggestion: Facebook

Visual: Facebook or Instagram

Copy: Access to high-speed, reliable, and affordable internet is becoming more essential to our daily lives than ever. The Six County Association of Governments (AOG) is developing a broadband plan to expand internet availability, accessibility, and affordability in the region. Please complete the following survey and speed test by May 10 so your input and perspective can be reflected in the planning process: connectingutah.com/sixcounty. If you currently have internet access, take the 60-second Utah Internet Speed Test at <u>speedtest.utah.gov</u>.

Shareable Social Media Post #2:

Channel Suggestion: Twitter

Visual: Twitter

<u>Copy</u>: Is internet connectivity in your area great, slow, nonexistent, or too expensive? Take this quick online survey and internet speed test by Wednesday, May 10, so your input and perspective can be reflected in the plan to expand high-speed internet availability, access, and affordability in the region! Survey: <u>connectingutah.com/sixcounty</u>, Speed Test: <u>speedtest.utah.gov</u>

WEBSITE/NEWSLETTER CONTENT

Headline: Help Expand High-Speed Internet Access in Southwest Utah

Copy:

You can help shape the future of high-speed internet in Juab, Piute, Millard, Sanpete, Sevier, and Wayne Counties. Is your internet service slow, nonexistent, or too expensive? Your input is needed! Here's how you can help get the Six County area online:

- Take the 60-second Utah Internet Speed test at <u>speedtest.utah.gov</u>. Information gathered from the tests will impact where broadband expansion occurs. *Your internet speeds can vary during the day based on a variety of factors, so please take the speed test multiple times where you work, live, or anywhere you connect to the internet*.
- Share your story by taking the High-Speed Internet Survey at <u>connectingutah.com/sixcounty</u>.
- Encourage your family, friends, neighbors, and colleagues to take the speed test and survey. The more you help spread the word, the greater impact it will have on the future of high-speed internet in your community.

If you don't have internet, please share your input by calling **435-264-8880**.

The Six County Association of Governments (AOG) has received funds to develop a broadband plan to expand high-speed internet availability, access, and affordability. Six County AOG needs your help to identify gaps in internet connectivity and plan for a future where every resident, business, and student has the tools and knowledge to access the digital world.. Please complete the survey and speed test by May 10, so your input and perspective can be reflected in this planning process.

To learn more about the digital connectivity plan, visit <u>connectingutah.com/sixcounty</u>. For questions, contact a project team representative at **435-264-8880** or <u>connectingutah@utah.gov</u>.

There is also funding available now through the Affordable Connectivity Program (ACP) to help those who qualify get access to high-speed internet. This program provides eligible households \$30 off their monthly internet bill. Visit <u>acp.utah.gov</u> for more information.

ADDITIONAL CONNECTING UTAH COLLATERAL

The following materials have been created and distributed to inform the Utah Broadband Center's statewide Digital Connectivity Plan. Six County AOG may utilize and adapt these materials to fit any outreach or planning needs.

- English
 - o <u>Utah Internet Speed Test General Public Poster</u>
 - o <u>Utah Internet Speed Test General Public Flyer</u>
 - o <u>Utah Internet Speed Test Bookmark</u>
 - o Affordable Connectivity Program Flyer
- Spanish
 - o <u>Utah Internet Speed Test General Public Flyer</u>
 - o <u>Utah Internet Speed Test Bookmark</u>
 - o <u>Affordable Connectivity Program Flyer</u>


SIX COUNTY CONNECTIVITY

JUAB • MILLARD • PIUTE • SANPETE • SEVIER • WAYNE

Access to high-speed internet is no longer a luxury, but an essential utility to connect Utahns to work, education, health care, and commerce. Did you know that more than 3,713 households in the Six County area do not have access to the internet?

The Six County Association of Governments (AOG) is developing a broadband plan to expand high-speed internet availability, access, and affordability in the region.

SHARE YOUR STORY BY MAY 10, 2023

Six County AOG needs your help to identify gaps in internet connectivity and plan for a future where every resident and business in the Six County area has access to high-speed internet.

INTERNET SURVEY

Tell us about your internet service. Is it too slow, expensive, or even nonexistent? This survey will help us know what internet connectivity looks like for you right now and guide us in closing the gap between those with and without access to the digital world.





connectingutah.com/sixcounty

2. UTAH INTERNET SPEED TEST

Test your internet connection speed by completing a quick and easy speed test.

- Share your internet speed with us by completing a quick and easy test. Your Speed Test results will help identify gaps in high-speed internet service and areas in need of infrastructure expansion.
- Don't just take the test once! We need you to take the test *multiple times* – at home or where you work, during lunch or at the end of the day. All these factors impact internet speeds.





speedtest.utah.gov

DO YOU QUALIFY FOR THE AFFORDABLE CONNECTIVITY PROGRAM?

If you or someone in your household participates in any of the following programs, you automatically qualify for \$30 off your monthly internet bill or up to \$100 off a connected device.

- Free/Reduced School Lunch
- SNAP
- Medicaid
- Lifeline

- Federal Public Housing Assistance
- Federal Pell Grant
- WIC

For more information go to: acp.utah.gov

CONTACT INFORMATION

HOTLINE: 435-264-8880 **EMAIL:** connectingutah@utah.gov WEBSITE: connectingutah.com/sixcounty





connectingutah.com/sixcounty





TELL US ABOUT YOUR INTERNET CONNECTIVITY



connectingutah.com/sixcounty

SIXCOUNTY ASSOCIATION OF GOVERNMENTS





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TELL US ABOUT YOUR INTERNET CONNECTIVITY





