



Final Report to the General Assembly

Cell Phone Connectivity Interim Study Committee
December 2024 | Research Publication 824



Cell Phone Connectivity Interim Study Committee

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To Members of the Seventy-fourth General Assembly:

Submitted herewith is the final report of the Cell Phone Connectivity Interim Study Committee. This committee was created pursuant to Interim Committee Request Letter 2024-04. The purpose of this committee is to study cell phone connectivity in the state with a focus on identifying gaps in cell phone coverage.

At its meeting on October 15, 2024, the Legislative Council reviewed the report of this committee. A motion to forward this report and the bills therein for consideration in the 2025 session was approved.

Sincerely,

/s/ Rep. Julie McCluskie
Chair

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This report is also available online at:

<https://leg.colorado.gov/committees/cell-phone-connectivity-interim-study-committee/2024-regular-session>

Committee Charge

[Interim Committee Letter 2024-04](#) created the Cell Phone Connectivity Interim Committee to study and identify gaps in cell phone coverage across the state. The committee was authorized to meet four times and take two field trips to review connectivity efforts and improvements at major roadways, mountain passes, and popular trailheads, and in rural and historically disadvantaged communities. Additionally, the committee was charged with examining state tools and resources used to minimize service gaps, as well as cell phone company coverage maps for accuracy.

Committee Activities

The committee held four meetings during the 2024 interim and took two field trips. Briefings and presentations were made by government agencies, special interest groups, telecom companies, and members of the public on a wide range of subjects, including wireless coverage gaps, wireless communication for emergency services, and the permitting process for wireless infrastructure. The following organizations gave briefings and presentations to the committee:

- AT&T, T-Mobile, and Verizon;
- Basalt Chamber of Commerce;
- Cellular Telecommunications Industry Association;
- Colorado Broadband Office;
- Colorado Chamber of Commerce;
- Colorado Communications and Utility Alliance;
- Colorado Council of Authorities;
- Colorado Counties, Incorporated;
- Colorado Department of Law;
- Colorado Department of Public Safety;
- Colorado Department of Transportation;
- Colorado Farm Bureau;
- Colorado Public Utilities Commission;
- Colorado Technology Association;
- FirstNet Authority;
- Industrial Tower West;
- National Conference of State Legislatures; and
- Wireless Infrastructure Association.

The following sections discuss the committee’s activities during the 2024 interim.

Gaps in Wireless Service and Improvement Incentives

The committee heard about weak or nonexistent cell phone signals throughout Colorado and discussed ways to improve and incentivize service.

Rural communities. Rural areas often have poor cell phone coverage because of the low population density, which makes it economically impractical for cell phone companies to install cell phone towers. The Colorado Farm Bureau emphasized this point and explained that farmers in rural areas often lack stable cell phone service, resulting in many of them carrying two phones. County commissioners from rural areas and telecom industry representatives also highlighted the challenges of building wireless infrastructure in remote communities.

Mountainous areas. Mountainous areas frequently experience weak cell phone connectivity because rugged terrain obstructs the line-of-sight needed for cellular signals to travel effectively. The Colorado Department of Transportation (CDOT) gave an overview of the unique costs and challenges associated with constructing wireless infrastructure in mountain areas. AT&T representatives discussed their investment in deploying colocated cell-sites in Colorado's mountainous areas, including Glenwood Canyon, Lyons, and Clear Creek Canyon. Colocated cells allow for multiple wireless providers to share the same physical tower structure, which reduces costs and enables faster service.

Urban areas. Cities may have poor cell phone coverage due to factors such as dense buildings blocking signals, high user traffic overloading towers, interference from electronic devices, and poorly placed cell towers. The committee heard from community groups about the difficulties of constructing new cell phone towers in urban areas, due to aesthetics or health reasons, among others.

Incentives. The committee learned from the Colorado Broadband Office (CBO) in the Office of Information Technology about grants for expanding broadband in underserved areas in an effort to increase high-speed internet availability. Committee members agreed that a similar grant program could also benefit wireless infrastructure in areas experiencing poor connectivity.

Committee recommendations. As a result of its discussions, the committee recommends Bill B to establish the Wireless Telephone Infrastructure Grant Program in the Governor's Office to support wireless projects in underserved areas. The bill also allows CBO to allocate High Cost Support Mechanism money (federal funding for telecommunications companies that serve high-cost areas) for this purpose.

Emergency Communication

Cell phones are crucial for emergency communications, enabling quick contact with services such as 911 and providing important updates during a crisis. Committee members reviewed Colorado's cell phone infrastructure and accessibility to enhance resident safety.

911 services and emergency alerts. The Colorado Council of Authorities gave an overview of the 911 system in Colorado and explained how areas that lack stable wireless infrastructure have trouble reaching 911 operators during emergencies. The Department of Public Safety (DPS) expanded on this by discussing how communities that are underserved by the telecommunications industry may not receive emergency alerts and warnings during natural disasters.

First responders. FirstNet Authority is a federal program that aims to improve public safety by expanding wireless broadband networks and improving communications among first responders. The committee toured their facilities and learned about the importance of developing technology to aide first responders in areas with unreliable wireless infrastructure. The DPS also described to the committee how crucial wireless communication is for first responders as they need to be able to provide alerts, receive data, and communicate with each other.

Single point of contact. The committee discussed the need for a single point of contact for emergency services and recommended to formalize state agencies' role in improving cellular connectivity for this purpose. Testimony from first responders and 911 services supported streamlined communication to help avoid confusion and ensure a coordinated response. The CBO explained their role as a point of contact for broadband, but noted that their involvement with wireless was limited.

Committee recommendations. As a result of its discussions, the committee recommends Bill A, which requires the DPS to create a single point of contact for statewide emergency alert coverage, technical assistance, and language and access needs for wireless alert systems. The bill also expands the CBO's scope to include promoting access to wireless service.

Wireless Infrastructure Permitting Process

Deploying wireless infrastructure requires a permit, which involves coordination with various government agencies. The committee heard testimony about obstacles in the permitting process and explored ways to streamline and accelerate it.

State and federal law. Both state and federal laws regulate cell phone coverage, including cell tower placement, local government permitting, and setting standards for radiofrequency, with the Federal Communications Commission (FCC) having the most significant authority in this area. To provide a framework for the committee, the National Conference of State Legislatures gave an overview of network coverage in Colorado and highlighted how other states have attempted to regulate the industry. The Colorado Communications and Utility Alliance (CCUA) updated the committee on federal and state laws, including FCC regulations that impact the permitting process for new wireless infrastructure projects. The CCUA also described methods that telecom companies have used to speed up the permitting process.

Local governments. Municipalities are responsible for adopting their own set of laws governing the placement, design, and safety standards for cell phone structures. T-Mobile representatives gave an overview of their wireless infrastructure and cell coverage in Colorado, and explained that the inconsistent zoning and permitting requirements throughout the state slows down the construction of new wireless infrastructure projects. Verizon expanded on this by describing their own troubles with getting approval from local governments for new cell towers.

Committee recommendations. As a result of its discussions, the committee recommends Bill C, which makes changes to the local government approval process for wireless telecommunications facility applications.

Theft

Cell phone tower theft, especially of copper wiring or batteries, can cause outages, poor signal quality, and complete loss of connectivity by damaging or removing essential equipment needed for signal transmission. Theft also results in significant costs for the telecommunications industry due to repairs, replacements, and network downtime.

The committee heard from telecommunications representatives about the frequency of cell phone tower theft and related costs and connectivity issues. CDOT and industry representatives further emphasized that wireless communication facilities in remote locations are prone to vandalism and theft. The committee discussed potential policy solutions to curtail theft and vandalism, including stronger penalties and requiring salvage yards to keep records on all transactions involving telecommunications infrastructure materials.

Committee recommendations. As a result of its discussions, the committee requested a bill be drafted to change local government authority over fenced perimeter security alarm systems, transaction record requirements for infrastructure materials, and criminal penalties for tampering. The bill was ultimately not approved by the committee.

Field Trips: Lyons, Boulder, and I-70 Between Eisenhower Tunnel and Glenwood Canyon

Committee members took two field trips to learn first-hand about cell phone infrastructure and emergency response centers across the state. The field trips allowed for committee members to see the different types of cell phone structures deployed to enhance service in difficult terrain, as well as in high traffic areas. Committee members also learned about public/private partnerships for these projects, as demonstrated by CDOT and telecommunications providers for the canyon small cell towers.

The off-site outings also created opportunities for legislative committee members to ask questions and interact with the non-legislative committee members, who are telecommunications experts in their respective industries and agencies. Emergency response centers also showed how cell phone emergency calls are fielded and tracked.

Lyons and Boulder. The first trip on August 19, 2024, included tours of the following:

- colocated small cell towers in the St. Vrain Canyon near Lyons, led by CDOT and AT&T representatives;
- small cell nodes installed in a Boulder light post to enhance cellular coverage for high-traffic areas, led by AT&T representatives; and,
- FirstNet Authority, an independent federal agency that oversees a single, nationwide communications network specifically for first responders and the public safety community.

Glenwood Canyon to Eisenhower Tunnel. The second trip on September 3, 2024, included tours of the following:

- colocated small cell towers near Hanging Lakes in Glenwood Canyon, led by CDOT
- Vail Public Safety Communications Center serving all of Eagle County
- T-Mobile macro cell tower in Vail Village; and
- Eisenhower tunnel tour, including command centers and emergency response.

Summary of Recommendations

As a result of the committee's activities, the committee recommended three bills to the Legislative Council for consideration in the 2025 session. At its meeting on October 15, 2024 the Legislative Council approved the three recommended bills for introduction. The approved bills are described below.

Bill A — Single Point of Contact Wireless Services

The bill requires the Division of Homeland Security and Emergency Management (division) in the DPS to develop a single point of contact for statewide emergency alert coverage. The division is also directed to provide technical assistance to local jurisdictions about public alert system integration and recommend improvements to the wireless alert system for language and access needs. Additionally, the bill expands the scope of the CBO to include promoting access to wireless service.

Bill B — Wireless Telephone Infrastructure Incentives

The bill requires the CBO to establish a Wireless Telephone Infrastructure Grant Program and allows it to allocate high-cost support funds to finance wireless service deployment in unserved and underserved areas of the state. The CBO also must administer the grant program, determine areas of the state that qualify as unserved or underserved, and establish criteria for awarding grants.

Bill C — Local Government Permitting Wireless Telecom Facilities

The bill modifies the procedures for local government approval of telecommunications providers' applications to site or construct new wireless facilities, or make significant changes to existing ones. Additionally, the measure allows a local government to extend the 60-day time period to allow the local government to make timely requests for information to complete an application. The bill also prohibits a local government from requiring a provider to file a new application or secure additional permits when telecommunications equipment is being removed, discontinued, or replaced as long as certain requirements are met.

Resource Materials

Meeting summaries are prepared for each meeting of the committee and contain all handouts provided to the committee. The summaries of meetings and attachments are available at the Division of Archives, 1313 Sherman Street, Denver (303-866-2055). The listing below contains the dates of committee meetings and the topics discussed at those meetings. Meeting summaries are also available on our website at:

<https://leg.colorado.gov/committees/cell-phone-connectivity-interim-study-committee/2024-regular-session>

Meetings and Topics Discussed

July 9, 2024

- National Conference of State Legislatures presentation about federal and state cell phone laws
- Telecom Industry panel
- State Government panel about cell phone coverage efforts and regulations
- Public testimony

August 12, 2024

- Wireless Infrastructure Association presentation
- Colorado Technology Association presentation
- Colorado Broadband Office presentation
- Small Cell Carrier presentation
- Community panel about connectivity issues
- Colorado Counties Incorporated presentation
- Public testimony

August 20, 2024

- Colorado Communications and Utility Alliance presentation
- Public testimony
- Bill draft requests

October 1, 2024

- Public testimony
- Final action on bill draft requests