Date of Hearing: April 26, 2021

ASSEMBLY COMMITTEE ON TRANSPORTATION
Laura Friedman, Chair
AB 41 (Wood) – As Amended April 21, 2021

SUBJECT: Broadband infrastructure deployment.

SUMMARY: Requires actions by the California Broadband Council (CBC), California Public Utilities Commission (CPUC), the California Department of Transportation (Caltrans), and fixed internet service providers (ISPs) to facilitate the deployment of broadband infrastructure. Specifically, **this bill**:

1) Requires ISPs deploying broadband infrastructure to notify all parties in the census block by mail of the means to connect to or benefit from the broadband infrastructure.

2) Requires ISPs to maintain accessible maps on a website showing the location of broadband infrastructure, and to maintain a publicly accessible database of quotes provided to all persons and entities for deployment of broadband infrastructure.

3) Requires the CBC to define "priority areas" for broadband deployment and coordinate a notification system between CPUC, Caltrans, and ISPs for conduit installation.

4) Requires Caltrans, as part of each project located in a "priority area", in consultation with the CPUC and ISPs to install broadband conduit capable of supporting technology neutral telecommunication cables.

5) Requires Caltrans to develop guidelines and specifications for the deployment of broadband infrastructure using a microtrench where conduit cable is not feasible.

6) Requires Caltrans to work with ISPs to find an equitable way to pay for conduit installation.

EXISTING LAW:

1) Makes legislative findings and declarations setting forth policies related to telecommunications in California that strive for ubiquitous availability to high-quality telecommunications services in California.

2) Establishes the CBC as a 12-member body run by the California Department of Technology's Office of Broadband and Digital Literacy, in order to promote broadband deployment in unserved and underserved areas of the state as defined by the Public Utilities Commission, and broadband adoption throughout the state for the benefit of all Californians.

3) Requires Caltrans, under certain conditions, to notify companies or organizations, as defined, of anticipated construction projects for the purpose of encouraging collaborative broadband installations and for those entities to collaborate for the installation of broadband conduit as part of a project.

4) Authorizes companies or organizations to collaborate with the department to install broadband conduit as part of a project.

5) Requires Caltrans, by January 1, 2018, to develop guidelines to facilitate the installation of broadband conduit on state highway rights-of-way (ROW).

FISCAL EFFECT: Unknown

COMMENTS: Broadband development is a priority for local, state, and federal governments as exemplified by various state and federal Executive Orders (EO) that have been issued. In 2006, Governor Schwarzenegger issued EO S-23-06: Twenty-First Century Government, which created the California Broadband Task Force (of which Caltrans is a member) to bring together public and private stakeholders to better facilitate broadband installation, identify opportunities for increased broadband adoption, and enable access to and deployment of new advanced communication technologies. In 2013, President Obama issued EO 13616: Progress on Accelerating Broadband Infrastructure Deployment, which studied the challenges to deploying wired and wireless broadband including; barriers to deploying broadband for communities and the issuance of government permits, created the Broadband Deployment on Federal Property Working Group, required each department which sits on the working group to develop a broadband strategy for efficient deployment of broadband, and required the U.S. Department of Transportation to review and implement "dig once requirements."

Broadband accelerates improvements in infrastructure, public safety, the economy, and makes for an engaged citizenry. Access to broadband correlates with higher education and income levels, disability status, age, and race and ethnicity. The COVID-19 pandemic and the increased need for people to distance from one another has demonstrated a greater need for reliable broadband for work, health, and school. Over 2 million Californians lack access to broadband service, including 50% of rural housing units. As of December 2018, 23% of California's 8.4 million residents do not have broadband subscriptions. Approximately 674,000 households in the state lack high capacity broadband, with about 305,000 located in urban areas and 369,000 located in rural areas.

Broadband deployment continues to be a challenge. Urban California covers about 8,200 square miles and contains just under 95% of the population, while rural California is home to 5% of the population spread across more than 147,000 square miles. Lack of broadband deployment has been attributed to: increased need for high-performance broadband, network resiliency, and redundancy. There are varying needs for broadband across California, from no broadband to poor quality broadband to decent broadband service. The cost of deployment is also a challenge, for example delivering Gigabit Service to unserved and underserved Californians is estimated to require at least $6.8 billion in new private, federal and state investments.

Where is broadband needed? In 2020, Governor Newsom issued EO N-73-20: Broadband Action Plan 2020: California Broadband for All, which directs state agencies to take necessary actions to accelerate the deployment of broadband. EO N-73-20 directs the California Broadband Council to create a new State Broadband Action Plan by December 31, 2020, and review the plan annually. The plan must include: a roadmap to accelerate the deployment and adoption of broadband by state agencies, publically accessible information on all state and federal funding opportunities and eligibility requirements, and provisions to maximize the inclusion of tribal lands in all broadband access and adoption opportunities. EO N-73-20 also directs the CPUC to lead aggregation and mapping efforts in collaboration with the California State Transportation Agency (CalSTA) to address broadband access, public and private broadband infrastructure, state-owned infrastructure and rights-of-way, middle and last-mile network components and

digital equity plans. Lastly, EO N-73-20 directs CalSTA, Caltrans, and the California Transportation Commission to identify and incorporate the installation of conduit and/or fiber into appropriate and feasible transportation projects along strategic corridors.

Consistent with AB 1549 (Wood) Chapter 505, Statutes of 2016, Caltrans' Broadband Partnership Opportunity Map provides notification of publicly-funded highway projects to help determine where there may be opportunities to install broadband conduit. Companies or organizations working on broadband deployment may choose to collaborate with Caltrans to install broadband conduit as part of the state-sponsored project.

This bill requires an ISP to maintain a map on its website showing the broadband infrastructure it has deployed. This bill also requires ISPs to maintain a public database on their websites of quotes provided to individuals and entities that request the deployment of broadband infrastructure, including those quotes that have lapsed and those that remain open.

The California Broadband Council (CBC) is tasked to promote broadband deployment in unserved and underserved areas of the state and broadband adoption throughout the state. The CBC identifies state resources, encourages public and private partnerships, and recommends policy to provide high speed internet access throughout California. The 12-member CBC is supported by the California Department of Technology's Office of Broadband and Digital Literacy. Related to this bill, the CBC includes California State Transportation Agency Secretary David Kim and CPUC President Marybel Batjier, and a key duty is, "Identifying opportunities for state agencies and state broadband networks to share facilities, rights-of-way, or other resources related to broadband deployment and adoption."

"Dig Once": According to the Federal Highway Administration (FHWA), "Dig Once" refers to "requirements designed to reduce the number and scale of repeated excavations for the installation and maintenance of broadband facilities in ROW." There are various interpretations of what may constitute a dig once policy and/or policies and practices to facilitate broadband deployment. A few recommendations from the FHWA include:

- Restrict the installation of fiber optic facilities to only one time within the useful life of the facility, or to a point in time when the existing capacity of the conduit is full.
- In the design of new highway facilities, consider the utility service needs of the area and identify the location of these services.
- Collaborate with service providers on joint highway and utility planning.

The FHWA has supported federal demonstration projects on minimizing street cuts for utilities and mitigating the impacts of the construction on traffic operations, safety, pavement performance and maintenance. As a result of the Telecommunications Act, the Federal Communications Commission (FCC) has also provided guidance to states on installing fiber optic facilities that involve a competitive procurement process while minimizing excavation. The guidance indicates that states should notify third-party telecommunication providers regarding the opportunity to install their facilities in the ROW, and give adequate time to respond. In addition, the FCC guidance recommends that states should require the selected contractor to install spare fiber and empty conduit to accommodate reasonably anticipated future demand, and connection points (i.e. manhole or cabinets) where third parties can access the conduit.11 states currently have a "Dig Once" type of policy; North Carolina, Utah, Arizona, Minnesota, Nevada, Maryland, Georgia, West Virginia, Maine, Illinois and California.

California's policy requires Caltrans to notify broadband deployment companies and organizations during the planning phase of projects that are suitable for the installation of broadband during Caltrans-led highway construction projects. "Dig Once" is supported by the California Broadband Action Plan which calls for implementing a "Dig Smart" policy and, as part of its 12-month action plan, calls on Caltrans to: "…install conduit as part of any appropriate and feasible state-funded transportation project in strategic corridors, as an incentive for service build-outs to un-and under-connected communities. Dig Smart policies present an opportunity to lower the capital cost of infrastructure deployment and minimize disruptions caused by ongoing or duplicitous construction, both incentivizing and expediting new investments"

The cities of Santa Cruz, San Francisco, Gonzales, Brentwood, and Loma Linda and the counties of Santa Cruz, and San Benito have all implemented "Dig Once" policies. Examples of some of these local policies include: city staff coordinate trench access for interested parties, application acceptance contingent on a cost-benefit analysis, a five-year moratorium on excavating streets that have been reconstructed, require all excavators in the public right-of-way (PROW) install telecommunications conduit, require all new construction connect to the city's existing fiber network through ordinances laid out in a Connected Community Program.

Impacts of "Dig Once": Disadvantages of "Dig Once" policies include the possibility that empty conduit may remain unused. In Virginia, there were certain restrictions on telecommunication providers not being able to lease infrastructure when providing services to government agencies. The Virginia Department of Transportation ended up having to sell portions of the conduit system, which took years. Additionally, it could take years for companies to develop a need for the use of the conduit. With no active fiber inside the conduit to provide incentive for states and companies to protect conduit from road work and other hazards, conduit might become damaged and unusable. Other noted disadvantages include additional administrative costs to the state and local governments for maintenance and leasing.

A 2018 NEOConnect report titled "Policies and Ordinances That Facilitate Broadband Deployment" finds that, "Policies that encourage placement of conduit or fiber optic cable when a trench is open eliminate much of the capital costs for network deployment. By coordinating with other city, county, or state capital projects, additional conduit can be placed within an open trench when other work is being performed in the right of way. Types of projects where additional conduit could be installed might include - sidewalk improvements, street light and trails construction and maintenance, road construction and road widening projects, and any underground utility project."

A Government Accountability Office report on Broadband Conduit Deployment emphasizes that, "flexibility is needed to accommodate states' and localities' existing laws, policies and broadband deployment programs, including the ability to set their own conduit access and leasing rates."

The cost of "Dig Once": The FHWA estimates that 90% of the cost of deploying broadband is when the work requires significant excavation of the roadway. This means that it is 10 times more expensive to add broadband after a road is already built. The cost is minimal; however, if the installation is not underground or if the conduit only need be placed 2-3 feet (or less) underground. In addition, most private utility infrastructure is installed outside of the highway ROW.

The FCC has indicated that the largest cost element for deploying broadband via fiber optic cable is the cost of placement, such as burying the fiber in the ground, rather than the cost of the fiber itself. The cost savings in limiting the number of times a road must be opened up to deploy broadband is noted as the greatest advantage of implementing dig once practices and policies. These advantages, however, apply primarily to areas of high density, such as urban environments, where the entire ROW is paved and the only option to install cable is below ground. In addition, if utilities are installed underground within the ROW, but are not under the roadway, it is easier to install and less costly.

The Biden Administration's "American Jobs Plan," proposes to bring affordable, reliable, high-speed broadband to every American through a $100 billion investment. This investment includes:

- High-speed broadband infrastructure to reach 100 percent coverage. The plan prioritizes building "future proof" broadband infrastructure in unserved and underserved areas, and support for broadband networks owned, operated by, or affiliated with local governments, non-profits, and co-operatives.
- Sets aside infrastructure on tribal lands and that tribal nations are consulted in program administration.
- Creates good-paying jobs with labor protections and the right to organize and bargain collectively.
- Promotes price transparency and competition among internet providers, including by lifting barriers that prevent municipally-owned or affiliated providers and rural electric co-ops from competing on an even playing field with private providers, and requiring internet providers to clearly disclose prices.
- Reduces the cost of broadband internet service and promotes more widespread adoption.

Committee Comments: The policy of "Dig Once" is cited as a tool for broadband deployment at the state and federal level, and has been successfully implemented at the local level in California. Caltrans and ISPs state that the work of implementing Assembly Bill 1549 (Wood, Chapter 505, Statutes of 2016) has been very successful, and has led to increased collaboration between the Caltrans and ISPs in order to ensure broadband deployment. Considering the success of "Dig Once", and the current and continued work of Caltrans and ISPs on broadband deployment, the committee raises the following comments.

Public infrastructure for a private industry: This bill requires Caltrans, a state agency, to install broadband conduit capable of supporting fiber optic communication cables for private, for-profit telecommunications companies. State infrastructure is built and maintained using public monies, and is intended to serve the public good. The telecommunications industry is a competitive market intended to generate profit. Unless broadband is to become a public good, regulated and funded as such, much like roads and public transportation infrastructure, it does not behoove the state to expend public resources for the benefit of private industry. This bill does not determine how the cost to Caltrans of laying conduit for private telecommunications companies would be funded. It would be inappropriate to use tax payer funding for these costs when the conduit benefits private, for-profit companies.

Liability and Safety: Caltrans is not charged with maintaining, inspecting, or planning the state's telecommunications system. While utilizing Caltrans' ROW to deploy broadband through utility encroachment permits is an important part of connecting the state, it is the CPUC who oversees

the quality and safety of the telecommunications infrastructure. This poses concerns regarding Caltrans' responsibility when a conduit cable is installed incorrectly or requires maintenance.

Microtrenching is a practice that has not been vetted or shown to have continued success on California's roadways. Given wear and tear on the roads, and the shallow reach of mircotrenching, it is possible for conduit cable to reach the surface of the road, and ultimately pose safety risks for drivers. The author should work with Caltrans, ISPs, and the CPUC to identify when mircotrenching would be appropriate for broadband installation.

The committee focused on Section 2 of this bill, as Section 1 deals with issues outside of the scope of this committee's jurisdiction.

*According to the author, "*As we develop our state infrastructure, in both the private and public sector, we need to consider maximum broadband deployment when we already have open trenches or are laying fiber. There is a recognition that the solutions presented here will not apply to every single improvement of a state right of way, or even to each expensive extension into an unserved area by an ISP. However, this bill intends to ensure that all possible connections and efficiencies are weighed seriously and in good faith. Californians are no longer asking "if" they will be connected, but "how". Simply, we need better answers from our providers as to why some communities remain perennially offline. This bill seizes upon planned infrastructure upgrade opportunities to prepare California for a future that is already here."

In support, the Rural Caucus of the California Democratic Party writes, *"*While not a complete solution, this bill will help optimize the opportunities that do arise for broadband infrastructure deployment. Knowing where broadband is lacking enables planning. Having at least the "bare bones" of broadband infrastructure deployable as other work is done will encourage complete deployment much faster and cheaper.

In opposition, the California Cable and Telecommunications Association writes, "CCTA shares the goal of Assembly Bill 41 to ensure that all Californians have access to high-speed internet service and generally supports the "dig once" policy in Section 2 of the bill. However, CCTA has serious concerns with Section 1, which would impose unnecessary obligations on internet service providers ("ISPs") and deter private sector investment to expand broadband access. CCTA has proposed amendments to instead improve the Line Extension Program to connect unserved households in rural California."

Related and previous legislation: SB 4 (Gonzalez) of 2021 authorizes the California Public Utilities Commission (CPUC) to leverage monies from the California Advanced Services Fund (CASF) with other federal and state sources for broadband deployment. This bill is currently pending on the Senate Floor.

AB 980 (Wood, 2017-2018) would have required Caltrans to install broadband conduits capable of supporting fiber optic communication cables. This bill was held in the Assembly Communications and Conveyance Committee.

AB 1549 (Wood) Chapter 505, Statutes of 2016 requires that Caltrans, during the planning phase of specified Caltrans-led highway construction projects, notify broadband deployment companies and organizations on its Internet Web site of transportation projects that involve construction methods suitable for the installation of broadband.

SB 740 (Padilla) Chapter 522, Statutes of 2013 clarifies aspects of the CASF Program, in addition to eligibility.

AB 1299 (Bradford) Chapter 507, Statutes of 2013 requires the CPUC to fund grants for the deployment and adoption of broadband services in publicly supported communities using the Broadband Public Housing Account (Housing Account) established within the CASF.

SB 1563 (Padilla) Chapter 674, Statutes of 2002 requires the State Public Utilities Commission to conduct a proceeding to identify reasons why advanced communications technologies are not commonly available and to develop strategies for more widespread deployment of such technologies.

SB 1462 (Padilla) Chapter 338, Statutes of 2010 establishes a nine-member California Broadband Council to promote broadband deployment and adoption throughout the state, and requires the Council to ensure that state agencies are coordinating efforts and resources to promote broadband deployment and adoption

SB 1040 (Padilla) Chapter 317, Statutes of 2010 authorizes CASF funding for regional consortia and expands the CASF into three accounts, including one for the Rural and Urban Regional Broadband Consortia Account (Consortia Grant program) funded with $10 million.

REGISTERED SUPPORT / OPPOSITION:

Support
County of Marin
First 5 California
New Livable California Dba Livable California
Ochin, INC.
Rural Caucus, California Democratic Party
South Bay Cities Council of Governments

Oppose
CTIA

Oppose Unless Amended
California Cable & Telecommunications Association
Consolidated Communications Services Co. Dba Surewest

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