From:	Solov, Nate
To:	Tom, Stephanie@CIO; CA Broadband Council
Cc:	
Subject:	RE: Crown Castle comments and request for revision - Action Plan
Date:	Friday, November 20, 2020 12:09:40 PM
Attachments:	image002.png
	Crown Castle letter - Broadband Council - Action Plan revisions - 11-20-20.docx
	Broadband Action Plan - 11-17-20 - revisions - Crown Castle - 11-20-20.docx

Apologies but please use these attachments – there was an error in the prior attachment letter. Thanks, Nate ████████████

Nate Solov
Policy Advisor
NOSSAMAN LLP

NOSSAMAN LLP

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From: Solov, Nate
Sent: Friday, November 20, 2020 12:04 PM
To: ████████████████████████████████████ ; 'CABroadbandCouncil@state.ca.gov' <CABroadbandCouncil@state.ca.gov>
Cc: ████████████████████████
Subject: Crown Castle comments and request for revision - Action Plan

Hi Stephanie and Broadband Council – here is Crown Castle's comment letter and revision requests to the Action Plan. Thanks for your hard work and consideration of our revisions. Have a great Thanksgiving. – ████████████

Nate Solov
Policy Advisor
NOSSAMAN LLP

NOSSAMAN LLP

November 20, 2020

Dear Broadband Council,

Thank you for your hard work and continued efforts to improve high-speed internet access for Californians.

Crown Castle is requesting two critical revisions to the Broadband Action Plan:

1. That "deployment" be added as a fifth core challenge.

2. That more specific recommendations be included about what the state can do to accelerate broadband deployment. Specifically: create statewide broadband permitting timelines and standards that lead to broadband projects getting approved quicker at the local government level and mandate the use of fiber deployment best practices such as aerial fiber on existing utility lines and underground microtrenching.

Barriers to broadband deployment at the local level is a factual issue in California that directly impacts every broadband project and determines how long each project will take to benefit local residents.

Expediting permitting and deployment barriers is the fastest and most cost-effective way to improve high-speed internet access in the short and long term. To put things in perspective, Crown Castle currently has over a thousand pending broadband permits in California that would improve connectivity for several million residents. Over the last decade, the state's Advanced Services Fund has only funded 77 projects that improved connectivity for roughly 320,000 households.

Broadband is critical infrastructure of statewide importance yet every local jurisdiction has different permitting rules and timelines. Some take 60-90 days and some take years – for the same project.

"Permitting Authorities" include cities, counties, state agencies and any other entity that may be required to issue a permit for a Broadband project like water districts, special districts and municipal utilities. Examples of permitting processes by local jurisdictions that can cause deployment delays include:

- Expensive, multi-layered, unnecessary, permitting processes that include multiple reviews, hearings and appeals.

- Even though permits should be limited to reasonable cost recovery (a couple hundred dollars) but are often thousands or tens of thousands of dollars.

- Often times projects require multiple permits from multiple departments within a single permitting authority and these departments do not coordinate review nor fee collection.

- Inconsistent application of standards, technically infeasible design restrictions and aesthetic limitations cause significant delays.

- Requiring below ground trenching for fiber even though above-ground utility lines are available along the same route.

- Certain Permitting Authorities continue to perform a separate CEQA review for Broadband projects which is an unnecessary expense.

- Certain permitting authorities refuse to follow federal FCC rules that mandate deployment within certain timeframes and parameters. This causes unnecessary litigation and expenses on legal fees instead of spending that money on the installation of broadband infrastructure.

These barriers impact every community: small and large, urban and rural, wealthy and underserved. Action from the state to mandate more efficient broadband permitting rules can benefit every community.

Solutions need to address both bureaucratic barriers that inhibit private investment while also providing state funding to help bridge the gap to deploy in California's most underserved and hard to reach communities.

Over 30 other states have adopted legislation mandating the quick deployment of broadband by local jurisdictions to prevent deployment delays related to permitting.

Below are real examples of similar broadband projects from local jurisdictions in California illustrating jurisdictions that use best practices and others that create barriers to deployment:

Best Practice	Barrier
Time to permit: 127 days	Time to permit: 350 days
Cost of permits: $300k	Cost of permits: $400k
Miles of fiber installed: 16 miles	Miles of fiber installed: 6.5 miles (on hold due to cost)
Construction cost: 6.5 million	Construction Cost: 12 million
# of people served: 15 million	# of people served: 2.5 – 3 million
Why: Microtrench technology & ordinance	Why: Open trench and bore only options

Best Practice	Barrier
Time to permit: 6 weeks	Time to permit: 8 years
Construction Cost: 60k	Construction Cost: 8 million
Cost of permits: $40k	Cost of permits: $150k
Miles of fiber installed: 16 miles	Miles of fiber installed: 10 miles
Construction cost: 60k	Construction Cost: 10 million
# of people served: 1 million	# of people served: 11k
Why: aerial fiber allowed, Term Permit	Why: Open trench fiber, layered discretionary permits

Some local jurisdictions are already utilizing deployment best practices to more quickly deliver high-speed internet to their communities.

A city recently approved a term permit that allowed all permitting fees to be paid upfront and allowed fiber to be deployed on existing aerial utility lines resulting in 16 miles of broadband being installed in 6 weeks.

A city recently adopted an ordinance to speed up the construction process involved with installing fiber underground in areas where aerial utility lines weren't available. Instead of using traditional open-trench construction methods which take longer, cost more and create lane closures and disruptions to local communities, they utilized microtrenching technology which cuts a 2 inch wide and roughly 20 inch deep trench to lay the fiber underground while simultaneously backfilling and sealing. The entire process takes hours and cars can drive on the road the same day.

Please include the attached revisions to the Action Plan that will lead to quick, cost effective and efficient solutions bringing high-speed internet improvements to Californians in the short-term and long-term.

Crown Castle is the nation's largest shared telecommunications infrastructure provider. We design, build, install, operate and maintain broadband (wireline & wireless high-speed internet) for a variety of California customers including K-12 school districts, local governments, universities, ISPs, and cell phone carriers. We work with local governments and states across the country every day to deploy broadband.

What makes us unique is that we are a neutral host broadband infrastructure provider. That means when we install broadband, it's available to everyone: from schools and local governments to ISPs, carriers and the private sector. This maximizes deployment efficiency and offers the most benefit to local communities.

Thank you for your consideration of this request.

Sincerely,

ROCHELLE SWANSON, JD

Government Affairs Manager, Northern California, Crown Castle

California Broadband for All Action Plan

EXECUTIVE SUMMARY

[ADD WHEN DRAFT IS COMPLETE]

INTRODUCTION

Imagine a family of five, two working parents and three kids, all trying to access online resources required by their school and their jobs, without enough internet bandwidth to keep from knocking each other offline.

Imagine two seniors with medical needs, struggling to find reliable transportation to get to and from weekly medical appointments, losing hours every week and putting themselves at preventable risk, because they can't afford the broadband service required to access telehealth and they lack the digital skills to feel comfortable going online.

Imagine a couple that wants to open a small business in the Central Valley but can't make the numbers work without ability to take online orders—and can't get the reliable Internet access that guarantees it can get online.

Imagine a twenty-something-year-old, working a full-time minimum wage job by day and attending community college classes at night, trying to stream online learning videos and submit online homework with only a smartphone.

The digital divide reflects and reinforces systemic inequities. Eradicating the digital divide is a foundational step towards making California a place where everyone can thrive regardless of the circumstances of their birth. As individuals, broadband access underlies our ability to work, study, communicate, apply for government services, receive emergency information, access healthcare, and not only survive, but thrive. As a state, broadband is vital for our most critical systems, from our electrical grid, to our water supply systems, public safety and emergency response networks, as well as our ability to attract talent and businesses and compete on the world stage.

Broadband internet access is an essential service. As such, as the state of California, we commit here to a path forward to ensure all people can receive it, regardless of their geography or household income.

BROADBAND TODAY

As the fifth-largest economy in the world—as well as the most concentrated source of the world's online innovations—California runs on the power of high-speed Internet. Broadband powers our ability to be the number one state in the country for remote work, with [xxx million] people working from home.[1] [Add statistics. Example: In 2019, over 13 million Californians were eligible for reimbursed telemedicine.[2] Also include public safety.] We use broadband to scale our digital government services and ensure quick delivery of public safety information. For example, more than one million Californians have used the eight-minute online CalFresh signup to receive Supplemental Nutritional Assistance Program (SNAP) benefits.[3]

High-speed Internet is not a nice-to-have. It is a need-to-have.

Too often, however, our most at-risk Californians face the largest roadblocks to accessing broadband.[4] Income, age, education, disability status and ethnicity all correlate with lower broadband adoption.[5] Californians without a high school degree or with only a high school degree are significantly less likely to subscribe to broadband at home with a computing device (53% and 73%, respectively) compared to 97% of households making $100,000 a year or more. Additionally, the following groups are also under-adopting:

- Spanish-speaking (dominant) Latinos – 57%
- Asian-Americans - 73%
- People 65 and older (65-74: 71% and 75 and older = 62%)
- Disabled - 64%
- Income <20K - 52%
- Renter - 71 %

In 2020 California—and the country—witnessed how vital reliable, affordable, and accessible Internet is to everyday life. As the COVID-19 pandemic swept the nation, 50 million K-12 public school students saw their schools close and started learning from home.[6] Sixty-two percent of employed Americans reported working from home by the end of March, double the 31% of Americans working remotely at the beginning

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[1]https://www.forbes.com/sites/alexandratalty/2020/06/26/work-from-home-california-texas-named-as-best-states-for-remote-work/?sh=551e4c1383c9

[2] https://www.securemedical.com/telemedicine/13-million-californians-now-eligible-for-reembursed-telemedicine-services-through-medical/

[3] https://www.codeforamerica.org/programs/getcalfresh

[4]https://www.cetfund.org/action-and-results/statewide-surveys/2019-statewide-surveys/

[5]Refer to the CPUC's Broadband Adoption Gap Analysis, June, 2019, which concluded income was the most significant factor contributing to low adoption rates. https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/UtilitiesIndustries/Communications/Reports_and_Presentations/CDVideoBB/BAGapAnalysis.pdf

[6]https://www.commonsensemedia.org/sites/default/files/uploads/pdfs/common_sense_media_report_final_7_1_3pm_web.pdf

of the month.[7] By April, just one month into the pandemic, nearly half (43.5%) of Medicare primary care visits were provided through telehealth compared with less than one percent (0.1%) in February.[8] [Add closing sentences and additional California statistics]

Core Challenges

Californians face several sets of core challenges today when trying to access reliable, affordable, equitable broadband. They include availability (speed and reliability), affordability, devices & digital literacy, and data.

1. Availability: Speed and Reliability

<u>High-performance broadband needs have increased</u>

Broadband usage has changed dramatically over the last twenty-five years. Back in 1996, the FCC defined broadband internet as 200:200 kbps, which was good enough for email. In 2015, when the FCC last updated their definitions to 25:3 mbps, videoconferencing was largely confined to major corporations.[9] Those minimum speeds worked when they were set, when people mainly used broadband to browse the internet, email, and stream movies. But we live in a very different world today, where video conferencing, telemedicine, and other essential applications (e.g., sensors) demand high bandwidth uploads as well. Even the FCC's next tier of service, 50:5, which they call "baseline," would be strained to supply the needed bandwidth.[10] And bandwidth needs are increasing exponentially, so the baseline today will be inadequate tomorrow. For example, Cisco forecasted that average fixed broadband speeds in North America will grow from 56.6 mbps in 2018 to 141.8 mbps in 2023, or 20% per annum.[11]

California's broadband standards have not evolved to reflect these new realities. California currently defines broadband service in its core broadband subsidy program, the California Advanced Services Fund (CASF), as 6:1 or higher, and subsidizes build out at 10:1 or higher. This makes California one of [X number of] other states that define service and subsidize build out below the FCC 2015 benchmark of 25:3, and without any latency standards. The last several months have made it clear that neither the California, nor the Federal, definitions are sufficient.

Example 1: A household of four with two adults attending occasional virtual meetings, sending e-mail, and doing research, and two kids attending school classes using Zoom, the combined required bandwidth could easily exceed the FCC's minimums.[12]

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[7] https://news.gallup.com/poll/306695/workers-discovering-affinity-remote-work.aspx

[8] https://www.hhs.gov/about/news/2020/07/28/hhs-issues-new-report-highlighting-dramatic-trends-in-medicare-beneficiary-telehealth-utilization-amid-covid-19.html

[9] https://docs.fcc.gov/public/attachments/FCC-15-10A1.pdf

[10] https://www.federalregister.gov/documents/2020/03/10/2020-03135/rural-digital-opportunity-fund-connect-america-fund

[11] https://www.cisco.com/c/en/us/solutions/collateral/executive-perspectives/annual-internet-report/white-paper-c11-741490.html

[12] Source: https://www.fcc.gov/consumers/guides/broadband-speed-guide?contrast=

Peak Bandwidth Utilization for a Family of Four

	PEAK BANDWIDTH UTILIZATION TYPICAL FAMILY OF FOUR (DAYTIME)	DOWNLOAD / UPLOAD
x1 Tele-Work Video Conferencing		1.5 Mbps / 1.5 Mbps
x2 Tele-Learning Remote Classroom		3.0 Mbps / 3.0 Mbps
x1 Streaming Music / Video		2.0 Mbps / 0.1 Mbps
x10 Home Security (Ring, etc.) and other household smart devices (Alexa, Cortona, etc.)		0.3 Mbps / 2.0 Mbps
TOTAL BANDWIDTH USE (rounded)		**7 Mbps / 7 Mbps**

	PEAK BANDWIDTH UTILIZATION TYPICAL FAMILY OF FOUR (EVENING)	DOWNLOAD / UPLOAD
x1 Online Video Gaming		2.0 Mbps / 1.0 Mbps
x2 Streaming Video Applications (Netflix, Prime, etc.)		10 Mbps / 0.2 Mbps
x3 Surfing Internet		3 Mbps / 1.0 Mbps
x10 Home Security (Ring, etc.) and other household smart devices (Alexa, Cortona, etc.)		0.3 Mbps / 2.0 Mbps
TOTAL BANDWIDTH USE (rounded)		**15 Mbps / 4 Mbps**

Example 2: A resident runs a business from their home and needs to use their broadband connection to process financial transactions through e-commerce applications (Square, etc.), perform occasional video meetings with customers, transfer files via online cloud storage providers, and send e-mail. During the pandemic this resident's spouse is working from home and at least two children are at home requiring additional bandwidth for homework and entertainment needs. During these times the family would need at least 20 Mbps downstream and 17 Mbps upstream.

Peak bandwidth utilization for a Home Business & Large Family

	PEAK BANDWIDTH UTILIZATION HOME BUISNESS (DAYTIME)	DOWNLOAD / UPLOAD
x1	Home Business Operations	10.0 Mbps / 10.0 Mbps
x1	Tele-Work Video Conferencing	1.5 Mbps / 1.5 Mbps
x1	Streaming Video Applications (Netflix, Prime, etc.)	5.0 Mbps / 0.2 Mbps
x2	Tele-Learning Remote Classroom	3.0 Mbps / 3.0 Mbps
x10	Home Security (Ring, etc.) and other household smart devices (Alexa, Cortona, etc.)	0.3 Mbps / 2.0 Mbps
	TOTAL BANDWIDTH USE (rounded)	**20 Mbps / 17 Mbps**

	PEAK BANDWIDTH UTILIZATION MULTI-GENERATIONAL FAMILY OF ELEVEN (EVENING)	DOWNLOAD / UPLOAD
x2	Online Video Gaming	4.0 Mbps / 2.0 Mbps
x3	Streaming Video Applications (Netflix, Prime, etc.)	15.0 Mbps / 0.3 Mbps
x3	Surfing Internet	3.0 Mbps / 1.0 Mbps
x1	Video Chat (Zoom, etc.)	1.5 Mbps / 1.5 Mbps
x10	Home Security (Ring, etc.) and other household smart devices (Alexa, Cortona, etc.)	0.3 Mbps / 2.0 Mbps
	TOTAL BANDWIDTH USE (rounded)	**24 Mbps / 7 Mbps**

Residential availability today

As of December 31, 2018, 96.3% of Californian households had residential access to broadband at speeds of 25:3 or greater, and 94.9% had access to speeds of 100 mbps down or greater, reflecting widespread cable and fiber access in urban population centers.[13]

There are three core issues with this picture of availability.

First, too many households still lack access to high performance broadband. 94.9% access to speeds of 100 mbps or higher leaves 673,730 households that do not have access to broadband at those speeds. These are largely concentrated in rural areas. As the Governor's Wildfires and Climate Change Strike Force report noted in 2019, "the lack of broadband in rural communities and access to cell services makes it difficult to communicate clear emergency evacuation orders to residents or to locate residents when they are in trouble."[14]

Second, this analysis likely over-represents actual availability of high performance broadband at residential addresses.

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[13] 2019 CASF Annual Report, p 11
[14] "Wildfires and Climate Change: California's Energy Future," A Report from Governor Newsom's Strike Force, April 12, 2020; p 12

Third, the high-performance broadband that is available may be prohibitively expensive for households.

<u>Insufficient network resilience and redundancy</u>

Unfortunately, progressively worse fire seasons have shown a spotlight on the limited requirements that broadband providers have to ensure redundancy or hardening in the operations of their infrastructure. Given progressively worsening fire seasons and a changing climate, there is a risk that broadband access may fail due to power shut offs or damage done to fragile, legacy infrastructure.

<u>The market underserves poor, rural, black and brown communities</u>

Poor, rural, black and brown communities are more likely to have poor access to high performance broadband internet. The CPUC's analysis of AT&T and Frontier networks showed a clear inverse relationship between household income and principal service quality metrics such as out of service repair intervals.

There are economic reasons for this. The capital costs are simply too high, and there are too few paying customers to generate a positive return on investment.

Without public intervention and regulation, for-profit providers do not have a market incentive to provide equivalent service to poor and rural communities. It is unprofitable, and leads to vast inequities in service. This is why California has historically subsidized telephone networks in rural communities, and provided discounts for low-income individuals and continues to do so for broadband networks.

<u>Multi-billion dollars required to build out statewide fiber</u>

The California Broadband Cost Model (CBCM) being developed by CPUC will estimate the cost for a fiber to the premises (FTTP) connection to every unserved and underserved location in California, including a scenario that calculates the cost to serve the highest cost parts of the state. The CBCM will help the state to target funding and deployment, and to measure progress.

Served status in the CBCM is based on the most recent, validated, census-block level California Broadband Deployment Data. Key assumptions in the engineering-based model include construction parameters around the reuse of existing broadband infrastructure, construction costs (e.g., pole attachment, network sharing, and labor rates), material costs, and regulatory costs including rights of way access.

2. Affordability

Price matters. When we consider what broadband costs for a Californian, we have to account for all of its price tags. The service cost is just one component, with taxes, surcharges, provider fees, rental charges for modems and routers, as well as the cost of actual devices used for getting online – such as laptops and tablets. Each of these is mandatory cost – and barrier – to getting online. There are additional unexpected costs of contractual penalties if a family falls behind and has to catch up, cancel, or switch plans. On a budget where parents work minimum wage jobs, purchasing food take precedence over purchasing Internet services.

More than half of California non-adopters simply can't afford market prices or don't own a computer.[15] Many believe they could pay total monthly bills of $10-$15/month.[16] While some affordable broadband programs offered by providers are within this price range, Lifeline programs are limited to people living just above the poverty line, most broadband providers do not participate in the Lifeline program, providers do not provide truly high performance broadband (only at least 15/2), and more than 70 percent of California non-adopters were unaware that these programs existed.[17] The state LifeLine program does not offer standalone broadband, and the state's five largest Internet service providers, which serve 97% of subscribers in the state, do not participate.

The market price of broadband is high, largely because there is very little fixed-broadband competition, particularly at the speeds and performance required today. Five wireline providers account for more than 90% of the residential broadband subscriptions in the state. Looking at 100:10 is instructive. 8% have no access, the availability problem discussed above. 26% have only one choice. 43% have a duopoly. And only 13% were able to choose between 3 or more providers.[18]

As a result of this trend, broadband prices not just in California, but nationally, are amongst the highest in the world. This is also an equity issue. Wealthier communities are 2-3x more likely to have more than two choices than lower-than-average household incomes.

Consumers benefit when companies are forced to compete for customers. Research shows that broadband competition reduces prices, and improves service.[19]

But there are high barriers to entry for prospective internet service providers in California, and they require concerted help to overcome them. This is why we need to adopt new models that don't rely exclusively on provider-owned infrastructure and employ a service-based competition model where multiple internet services are available over the same cable or wire entering your home. Separating the primary barrier to market entry, last mile infrastructure, from service provisioning, opens up competition based on service quality and price.

3. Devices and Digital Literacy

Access to the internet through only a smartphone is not a substitute for laptop or tablet with high-speed, reliable broadband. According to the 2019 CETF survey, 10% of Californian households only have

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[15] https://www.cetfund.org/action-and-results/statewide-surveys/2019-statewide-surveys/

[16] Sallet, Jonathan. October 2019. Broadband for America's Future: A Vision for the 2020s. Evanston, IL: Benton Institute for Broadband & Society. https://www.benton.org/publications/broadband-policy2020s pg 65-66

[17] https://www.cetfund.org/action-and-results/statewide-surveys/2019-statewide-surveys/

[18] FCC Broadband Map

[19] See Benton's report for a review of the academic literature

access to broadband at home through smartphones. [OVERLAP WITH AT RISK POPULATIONS?] However, phones are not a substitute for adoption. [20] [STATS].

Adoption requires both a device and digital literacy. If people don't have the skills to use broadband, it doesn't matter if they have access—they won't be able to access the Internet and the world of opportunities, benefits, and life-changing support it offers. This takes on added urgency as we reach late adopters, who have missed out on much the last two decades of broadband use, experience, and training. [DIGITAL LIT STATS?]

4. Data

Imagine trying to solve a problem when you don't know exactly who has it, or where it occurs, or how much it will cost to fix it. That is the work of creating broadband policies that solve lived Californian problems today. Data about the costs, gaps, speeds, and access to broadband in California is disparate and subjective.

One data problem is granularity and accuracy. Data about availability is provided at the census block level. Blocks in urban areas might be an actual city block, but in rural areas, they might span miles. Additionally, concerns over the accuracy of California and FCC availability data remain, and can affect communities directly by making them eligible or ineligible for state and federal funds.

A second part of the problem is opacity. Some data that would help significantly in evaluating the quality of availability and adoption data is unavailable. For example, for the affordable broadband programs, what is the take-up rate? How quickly to customers cycle-off? How many people that apply are turned away? What are the prices for the same kind of service in different parts of the state? [Note: explore comparisons to other industries that may be useful]

Finally, broadband subscription data is critical to understanding where people actually have internet service, as opposed to where providers merely claim to offer service. Subscription data by address provides sufficient granularity to accurately map broadband affordability and adoption.

Data is not an end to itself. But without accurate, transparent, and updated data, we can't formulate good policies to solve real problems.

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[20] See also Appendix re: types of broadband

5. Deployment

The deployment of broadband is determined by each local permitting agency's discretion and directly impacts every high-speed internet project determining how long each project will take to benefit local residents.

Broadband is critical infrastructure of statewide importance yet every local jurisdiction has different permitting rules and timelines. Some take 60-90 days and some take years – for the same project.

"Permitting Authorities" include cities, counties, state agencies and any other entity that may be required to issue a permit for a Broadband project like water districts, special districts and municipal utilities. Examples of permitting processes by local jurisdictions that can cause deployment delays include:

- Expensive, multi-layered, unnecessary, permitting processes that include multiple reviews, hearings and appeals.
- Even though permits should be limited to reasonable cost recovery (a couple hundred dollars) but are often thousands or tens of thousands of dollars.
- Often times projects require multiple permits from multiple departments within a single permitting authority and these departments do not coordinate review nor fee collection.
- Inconsistent application of standards, technically infeasible design restrictions and aesthetic limitations cause significant delays.
- Requiring below ground trenching for fiber even though above-ground utility lines are available along the same route.
- Certain Permitting Authorities continue to perform a separate CEQA review for Broadband projects which is an unnecessary expense.
- Certain permitting authorities refuse to follow federal FCC rules that mandate deployment within certain timeframes and parameters. This causes unnecessary litigation and expenses on legal fees instead of spending that money on the installation of broadband infrastructure.

These barriers impact every community: small and large, urban and rural, wealthy and underserved. Action from the state to mandate more efficient broadband permitting rules can benefit every community. Expediting permitting and deployment barriers is the fastest and most cost-effective way to improve high-speed internet access in the short and long term. To put things in perspective, Crown Castle currently has over a thousand pending broadband permits in California that would improve connectivity for several million residents. Over the last decade, the state's Advanced Services Fund has only funded 77 projects that improved connectivity for roughly 320,000 households.

Solutions need to address both bureaucratic barriers that inhibit private investment while also providing state funding to help bridge the gap to deploy in California's most underserved and hard to reach communities.

Over 30 other states have adopted legislation mandating the quick deployment of broadband by local jurisdictions to prevent deployment delays related to permitting.

Below are real examples of similar broadband projects from local jurisdictions in California illustrating jurisdictions that use best practices and others that create barriers to deployment:

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A city recently adopted an ordinance to speed up the construction process involved with installing fiber underground in areas where aerial utility lines weren't available. Instead of using traditional open-trench construction methods which take longer, cost more and create lane closures and disruptions to local communities, they utilized microtrenching technology which cuts a 2 inch wide and roughly 20 inch deep trench to lay the fiber underground while simultaneously backfilling and sealing. The entire process takes hours and cars can drive on the road the same day.

VISION: Digital Equity for All

For California and Californians to thrive, we envision a future in which all Californians have affordable high-performance broadband available at home with the devices and skills to unlock opportunities through digital inclusion.

Specifically, we want to ensure all Californians:

1. **Have high-performance broadband available at home**: Broadband must be available everywhere in the state, from the most rural areas, including tribal lands, to the most populated

urban areas, including all low-income neighborhoods. For the homeless or those without broadband at home, we will continue to ensure anchor institutions provide broadband to meet people where they are. Speeds must be sufficient to meet the growing demand and reliance for access to education, government, public safety, economic prosperity and healthcare via high-speed access to the Internet.

2. **Can afford broadband and the devices necessary to access the internet**:   Internet service plans and devices must be affordable for all Californians, regardless of geographic location or household income.

3. **Can access training and support to enable digital inclusion:** Californians must have access to digital skills training to for job opportunities and to thrive in a digital world.

HOW WE CAN GET STARTED

Over a four-month process, the California Broadband Council reviewed hundreds of pieces of public input, reviewed previous plans and goals and spoke with state departments as well subject matter experts across the country. The actions the California Broadband Council proposes exploring fall into four broad categories: policy reviews, program assessments, funding identification, and cross-sector collaboration.

Twelve-Month Action Plan

The California Broadband Council will begin each of these actions in calendar year 2021. The Council will evaluate progress toward the plan's three goals annually, or sooner, in the case of significant state or federal action.

The Office of Broadband and Digital Literacy within the California Department of Technology will continue to support the California Broadband Council in the ongoing assessment and progress of current and future plans.

GOAL 1: All Californians have Access to High-Performance Broadband at Home

1. Modernize speed and performance standards for broadband
   A. Explore shared standards among all state grant-funded programs:
      a. To define "served" as a census block that is 90% served at the current state broadband performance standard.
      b. To define "broadband" as, at least, matching the FCC standards of 25/3, if not increasing to reflect demonstrated needs (25/17).
      c. To prioritize funding for projects that will deliver at least 100 Mbps down/10 Mbps up (100/10). Annually assess speed targets for infrastructure subsidies or grants, or sooner if national goals change.
      d. To fund last-mile projects with explicit local government involvement to address universality and adoption.
      e. To fund middle-mile only investments in areas with limited infrastructure.

B. Adopt essential broadband service and affordability standards, and evaluate those standards relative to other essential service costs[21].
C. Explore alternative grant-making models similar to other state models, including additional options to generate competition to serve specific areas.
D. Enable all state grant programs to be leveraged for federal funding matching opportunities prioritizing unserved and underserved areas.
E. Deployments supported by state funding should be prioritized in local jurisdictions (county or city or city and county) where the government has streamlined the process for permitting and obtaining land use approvals.
F. Explore all financing opportunities by partnering with local governments and philanthropies to establish alternative financing mechanisms for broadband deployments in unserved and underserved areas.
G. Promote existing state contractual vehicles to support cost savings and efficient purchasing of broadband services and equipment by local public entities.
H. Modernize state's universal service programs to effectively support the deployment and ongoing maintenance of broadband networks.

2. Simplify and leverage existing assets and construction
    A. Implement a Dig Smart policy to install conduit or fiber as part of any appropriate transportation project in strategic corridors supported by state funding as an incentive for buildouts with priority for middle mile, open access deployments. It's important to note that fiber deployments often happen after the Dig Smart project and can be impeded by lengthy moratoriums on new fiber installations which is why best practices such as aerial fiber on utility lines and below ground microtrenching deployment need to be included as solutions.
    B. Create a streamlined state permitting process and right-of-way management to accelerate broadband deployment in the entire state to benefit all Californians.
    C. Begin the process to identify critical assets including state assets (fiber, conduit, and towers) and utility poles available to municipal, tribal, and private partners for lease.
    D. Quarterly convene broadband providers and local governments starting in January 2021 to create a statewide broadband streamlined permitting processes that gets existing and future permits approved quicker so Californians can immediately benefit from improved high-speed internet.
    E. Communicate with federal agencies to support prioritization of permits for broadband construction through federal land and when permit holders are experiencing delays.
    F. Prioritize the expeditious approval of the thousands of pending broadband permits with local jurisdictions across the state that can provide an immediate benefit to local residents.
    G. Mandate the use of broadband deployment best practices that are already being utilized by local jurisdictions to accelerate deployment.

3. Set reliability standards

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[21] See CPUC Framework to Assess Affordability of Utility Services, https://www.cpuc.ca.gov/affordability/

A. Explore standards around middle mile and/or backhaul resilience / reliability and penalties informed by CalOES recent experiences during wildfires.
B. Ensure consumer protection and that all consumers are served equitably by providers.

GOAL 2: All Californians can Afford Broadband and the Devices necessary to Access the Internet

1. Promote affordable broadband offers
   A. Partner with providers to promote and track the adoption of affordable Internet offers. Request providers to create multi-language marketing materials for distribution to under-adopting communities by leveraging existing private go to market campaigns and existing public programs, such as: CalFresh, , Cal Works, Covered California, and the National School Lunch Program (NSLP).
   B. Improve the California LifeLine Program through offering high-capacity, stand-alone broadband services, and ensuring all broadband providers participate in the program.

GOAL 3: All Californians can Access Training and Support to Enable Digital Inclusion

1. Provide technical assistance and support
   A. Identify opportunities for technical assistance to include support for local governments, tribes, nonprofits, and their partners to best leverage local, state, federal, and private funding opportunities.
   B. Provide state-level support and coordination for federal and national philanthropic grant applications increasing California's federal and philanthropic broadband funding.

2. Drive synergies across adoption and deployment initiatives through state programs
   A. Explore shared standards among state grant programs to prioritize joint infrastructure and adoption projects.
   B. Convene broadband adoption stakeholders semi-annually to innovate and create new digital literacy tools, curriculum and training programs to meet the needs of the workforce, community and students.

3. Strengthen partnerships and coordinate initiatives
   A. Leverage California Broadband Council meetings and the GoBiz broadband funding identification initiative to strengthen partnerships among anchor organizations such as schools, libraries, workforce development boards, county social service departments.
   B. Convene local government broadband coordinators and managers quarterly to identify barriers to local programming, new actions undertaken and tools developed at the local level and to support intra-state collaboration.

Cross-Cutting Actions that Support All Goals

1. <u>Strengthen broadband data and mapping transparency and usability</u>

   A. Collect more granular and accurate broadband data, build out and public broadband deployment maps with explicit focus on low-income urban neighborhoods, and use provider specific data to drive accountability and measure progress.

   B. Use feedback from businesses, local governments, tribes, nonprofits and every day Californians, to establish a Broadband for All portal to ensure easy access and navigation of state broadband information to include:
      i. A page to aggregate feedback from the field to validate data in the California Interactive Broadband Map such as broadband speeds, access, easements and rights of way;
      ii. A central repository for resources and toolkits for specific to broadband planning and implementation;
      iii. A central repository of digital inclusion plans, initiatives and best practices;
      iv. Information on affordable Internet Broadband offers, devices and training;
      v. A central repository for state-level broadband funding opportunities using the grants.ca.gov site.

   C. Expand California data availability to assist stakeholders by including the following data and visualizations:
      i. Existing assets, asset ownership, geographic boundaries, roads, anchor institutions, fairgrounds and public rights of way.
      ii. Broadband availability and use throughout the state.

2. <u>Leverage the State's convening power</u>

   A. Convene local governments and private sector representatives semi-annually to understand broadband goals, priorities, and roadblocks resulting in documentation of priorities and recommendations to integrate into Broadband for All metrics and action plan updates.

   B. Require executive branch entities and request constitutional agencies to incorporate broadband into their strategic plans, and submit broadband priorities to the California Broadband Council annually for review and recommendations to ensure effective interagency collaboration.

Conclusion

[ADD WHEN DRAFT IS COMPLETE]