August 11, 2022

To: Supervisor Holly J. Mitchell, Chair
           Supervisor Hilda L. Solis
           Supervisor Sheila Kuehl
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           Director

QUARTERLY UPDATE – INVESTMENTS TO ACCELERATE DIGITAL EQUITY

On November 16, 2021, the Board of Supervisors (Board) approved a motion to invest in immediate- and longer-term efforts to facilitate affordable and reliable high-speed internet services to underserved communities impacted by the digital divide (Board Agenda Item 19). The motion designated the Internal Services Department (ISD) as the lead department responsible for coordinating the County's efforts on all community broadband infrastructure and residential service initiatives to close the digital divide. The motion also included several directives and instructed the ISD Director to report back to the Board with quarterly progress updates.

Attached for your review is the third quarterly update.

If you have any questions, please contact me at (323) 267-2101.

SH:sh

c: Executive Office, Board of Supervisors
       Chief Executive Office
       County Counsel
       Department of Public Works
       Department of Economic Opportunity

COUNTY OF LOS ANGELES
INTERNAL SERVICES DEPARTMENT
INVESTMENTS TO ACCELERATE DIGITAL EQUITY

QUARTERLY PROGRESS REPORT
August 2022

On November 16, 2021, the Board of Supervisors (Board) approved a motion to invest in immediate and longer-term efforts to provide affordable and reliable high-speed internet services to underserved communities impacted by the digital divide (Board Agenda Item 19).[1] On February 7, 2022, the Internal Services Department provided its first quarterly progress report on achieving the directives discussed in the motion.[2] The second quarterly report was submitted on May 13, 2022.[3] This is the third quarterly progress report, which presents further updates.

Directive #1: Establish the County's lead department.	
Directive	Status
a. Designate the Internal Services Department (ISD) as the lead department responsible for ensuring the County's efforts on all community broadband infrastructure and residential service initiatives to close the Digital Divide are coordinated and aligned under the County's Digital Divide Action Team, which is comprised of representatives from all County Departments and the Chief Executive Officer's Chief Information Office (CIO).	Completed *Discussed in the 1st Quarterly Progress Report*

Directive #2: Conduct a Countywide campaign on financial subsidy programs.	
Directive	Status
a. Instruct the Chief Executive Office (CEO), in consultation with ISD, to identify funding for a countywide promotional campaign to inform and educate constituents about financial subsidy programs that will assist with the costs of computers and internet service.	Completed *Discussed in the 1st Quarterly Progress Report*

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[1] Los Angeles County Board of Supervisors, Statement of Proceedings for the Regular Meeting, November 16, 2021

[2] 1st ISD Quarterly Update - Investments to Accelerate Digital Equity, February 7, 2022

[3] 2nd ISD Quarterly Update - Investments to Accelerate Digital Equity, May 13, 2022

Directive #2: Conduct a Countywide campaign on financial subsidy programs.	
Directive	Status
b. Instruct ISD through the Delete The Divide initiative to coordinate the countywide promotional campaign and subsidy programs, specifically the Federal Emergency Broadband Benefit. Additionally, the campaign should encourage the participation of all County Departments and, as appropriate, collaborations with internet service providers, telecommunication companies, school districts, regional consortia, community-based organizations, non-profits, and ethnic and hyper-local media. Outreach must be conducted in the County's multiple threshold languages.	Completed *Phase1: EBB promotion* In Progress *Phase 2: ACP Promotion* *Discussed in the 1st Quarterly Progress Report and 2nd Quarterly Progress Report*

2(b) Phase 2 Promotional Campaign: Affordable Connectivity Program

On May 12, 2021, the Federal Communications Commission (FCC) launched the Emergency Broadband Benefit (EBB) Program to help families struggling to afford internet service during the COVID-19 pandemic. The $3.2 billion program provided qualifying households with a monthly subsidy up to $50 for broadband service and a one-time subsidy up to $100 for the purchase of a computer, laptop or tablet. Eligible households on Tribal lands received a monthly broadband discount up to $75.

On December 31, 2021, the EBB was replaced by the $14 billion Affordable Connectivity Program (ACP).[4] Under this new program, qualifying households can receive a monthly subsidy up to $30 for broadband internet service and a one-time subsidy up to $100 for the purchase of a computer, laptop or tablet. The monthly broadband discount for eligible households on Tribal lands remains at a maximum $75. Additionally, the ACP expanded the eligibility criteria and more households now qualify for subsidy benefits. An estimated 1.6 million households are now eligible for ACP in Los Angeles County[5].

On April 14, 2022, ISD launched a second countywide promotional campaign to increase awareness of the ACP and encourage enrollments. The campaign is a targeted multimedia, multi-language promotion that includes ethnic and hyper-local media. It also leverages partnerships and proactive support among groups that have trusted relationships with underserved communities, including community-based organizations, schools, libraries, healthcare agencies, faith-based coalitions, and County departments that provide public assistance and community services. The campaign is discussed in more detail in the first and second quarterly progress reports.

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[4] Affordable Connectivity Program website: https://www.fcc.gov/acp

[5] California Broadband for All: ACP Enrollment Tracker

The countywide promotional campaign has been effective in generating awareness and enrollments in the ACP. Additionally, public awareness about the ACP is steadily growing as regional consortia, community-based organizations, and internet service providers have increased marketing and outreach efforts. Support has also been elevated on a national level by United States President Joe Biden and Vice President Kamala Harris.

On May 9, 2022, the President Biden and Vice President Harris held a press briefing at the White House to announce private sector commitments to lower the cost of high-speed internet services and a comprehensive effort to enroll households in the ACP.[6] The White House asked participating internet service providers to either reduce prices and/or raise speeds to offer ACP-eligible households a high-speed plan of $30 or less per month.

On July 21, 2022, Vice President Harris held a press briefing on the benefits of the ACP and a call to action for governments and advocates to "spread the word" about the ACP.[7] The White House also identified several outreach initiatives among federal, state and local government agencies.

Nationally, Los Angeles County has the highest number of ACP enrollments among counties in every state. The following is a list of the top 10 counties as reported by the FCC in June 2022:

State	County	ACP Enrolled Households
California	Los Angeles	518,034
Illinois	Cook	189,095
Florida	Miami-Dade	143,617
Arizona	Maricopa	138,143
New York	Kings	137,609
Michigan	Wayne	133,333
Texas	Harris	129,862
New York	Bronx	124,957
Pennsylvania	Philadelphia	122,826
California	San Bernardino	117,566

Source: Universal Service Administrative Co.

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[6] White House Briefing Room Statement, May 9, 2022: Fact Sheet - President Biden and Vice President Harris Reduce High Speed Internet Costs for Millions of Americans ; Video recording of President Biden and Vice President Harris, May 9, 2022: Remarks on the Affordable Connectivity Program

[7] White House Briefing Room Statement, July 21, 2022: Fact Sheet - Vice President Harris Marks Important New Milestone in Administration's Efforts to Cut Costs for American Families

The following is a list of the 10 California counties with the highest enrollments as of July 2022:

County	Total Households	ACP Eligible Households	ACP Enrolled Households	Enrollment Percentage
Los Angeles	3,316,794	1,646,205	534,329	32%
San Bernardino	636,041	341,110	118,352	35%
San Diego	1,125,285	453,454	116,172	26%
Riverside	724,894	360,381	103,788	29%
Orange	1,037,494	397,766	95,248	24%
Sacramento	543,026	248,783	67,993	27%
Kern	270,281	155,323	67,053	43%
Fresno	307,908	176,750	60,232	34%
Alameda	577,177	209,926	38,579	18%
Santa Clara	640,216	204,684	35,645	17%

Source: California Broadband for All

In light of increasingly publicized efforts to bolster the ACP, ISD is refining the countywide promotional strategy. Currently, only 32% of eligible households are enrolled in the program and more than 1 million households have yet to sign up. A common concern and well-documented issue preventing thousands of households from internet adoption is the lack of a computer device. The County's ACP promotional campaign has referred people to resources to borrow and purchase computer equipment but will now assist in providing laptops to residents in need. ISD will administer a competitive solicitation to procure devices for ACP-eligible households and include provisions in the agreement for community relations, needs assessment, technical support, and digital literacy training.

Additionally, ISD has developed a Digital Navigator Program as a community-centered approach to improving broadband adoption and digital literacy. The navigators will be trusted guides and skilled support technicians trained to help families connect to and confidently use the internet, find affordable devices, and apply for subsidies to offset the costs for internet services and computer devices. They will also assist with related training or tutoring and serve a critical role in the successful deployment of the County's residential broadband projects.

ISD and Department of Economic Opportunity are collaborating on an implementation plan for the Digital Navigator Program. The goal is to employ local hires who reside in the communities where they provide assistance and work in unison with partner community-based organizations. Navigators will offer services by in-person visits to residences, community outreach events at resource centers and public venues, and dedicated call centers to receive assistance via telephone.

ISD is pursuing funding opportunities to support the Digital Navigator Program:

- In April 2022, the CEO accepted funding proposals from County departments for the American Rescue Plan Phase Two (aka Tranche 2). ISD submitted a request to fund the Digital Navigator Program. As of the date of this report, the request is still under review.

- The California Advanced Services Fund (CASF) Adoption Account is authorized $20.024 million for fiscal year 2022-2023 to provide grants to increase publicly available or after-school broadband access and digital inclusion. The application cycle deadlines are July 1, 2022, January 1, 2023, and every July 1 and January 1 thereafter until funds are exhausted. Eligible projects include:

    1) Digital Literacy Projects – Digital inclusion projects may include digital literacy training programs and public education to communities with limited broadband adoption, including low-income communities, senior citizen communities, and communities facing socioeconomic barriers to broadband adoption.

    2) Broadband Access Projects – Publicly available or after-school broadband access projects may include free broadband access in community training rooms or other public spaces, such as local government centers, senior citizen centers, schools, public libraries, nonprofit organizations, and community-based organizations. It may also include funding community outreach, such as analysis, comparison of Internet plans with the community, and call centers that will increase broadband access and adoption.

On July 1, 2022, ISD applied for a CASF Adoption Account Digital Literacy Grant. As of the date of this report, the application is still under review. The CASF website indicates that it has received 99 applications totaling $28,557,953.95.[8]

Directive #3: Expand and/or enter into new agreements with the County's existing broadband and/or carrier agreements for public access and use.	
Directive	Status
a. Instruct and authorize ISD to negotiate agreements with assistance from County Counsel and input from the CEO, with internet service providers and telecommunication companies and if the proposed agreement can be shown by ISD to be in the County's best interest, return to the Board for approval to execute new agreements or amend existing agreements.	On Hold

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[8] CASF Adoption Account: Applications Submitted July 1, 2022

34(a) Negotiate Agreements with Internet Service Providers

ISD has temporarily paused discussions with internet service providers and telecommunication companies related to Directive 3(a). The pause is necessary to avoid any conflicts and to preserve the integrity of the solicitation process related to Directive 4(b), discussed below.

Directive #4: Provide options for internet solutions, including cost estimates and timeline, that meet the digital needs of our most vulnerable residents: affordability, sustainability, and connectivity to high speed, quality service.	
Directive	Status
a. Authorize ISD to amend its agreement, as needed, with the contractor that assisted in the development of its report to the Board in response to Item 45G of the August 31, 2021 Agenda, to perform additional analysis for the options identified in the aforementioned report and provide program development services for future solicitations.	Completed *Discussed in the* *1st Quarterly Progress Report*
b. Instruct ISD to administer a competitive solicitation to acquire a Managed Service Provider to coordinate and manage implementation of the Community Wireless Network. The scope of work should include, but not be limited to, project management, infrastructure design, system integrations, performance requirements, equipment testing and maintenance, administration of resources, and customer support services.	Completed *Discussed in the* *2nd Quarterly Progress Report*
c. Instruct ISD to administer a competitive solicitation and negotiate agreements for public-private partnerships to construct and configure the Community Wireless Network.	In Progress *Discussed in the* *2nd Quarterly Progress Report*
d. Instruct CEO, in consultation with ISD and [Department of Public Works] to identify funding from Federal, State and/or County sources to support a five (5) year proof of concept model for a Community Wireless Network. Under the coordination of ISD, this pilot will utilize public-private partnerships and a Managed Service Provider for the deployment of a fully functional network of Citizen Broadband Radio Service and/or millimeter wave technologies to deliver reliable high-speed internet service to 12,500 households in digital divide target areas.	In Progress

Directive #4: Provide options for internet solutions, including cost estimates and timeline, that meet the digital needs of our most vulnerable residents: affordability, sustainability, and connectivity to high speed, quality service.	
Directive	Status
e. Delegate authority to the CEO to hire a consultant to conduct a financial and technical feasibility study for a County-administered municipal broadband service. The study should assess capital costs and consumer pricing models that will enable reliable high-speed internet access for households in digital divide target areas. The study should also consider existing County assets and licensing agreements as well as the utilization of public and private fiber optic and wireless network infrastructures that can be included in the County-administered strategy.	In Progress

4(b) Solicitation for Managed Service Provider(s)

In Los Angeles County, the highest concentration of households that lack internet service are in underserved and low-income communities. The County is not currently equipped or positioned to carry out the logistics necessary to enable internet services in these residential areas. Thus, ISD was instructed to administer a competitive solicitation to acquire one or more Managed Service Providers to implement and manage Community Wireless Networks.

On January 7, 2022, as part of the planning process and in the interest of transparency, the County of Los Angeles released a Request for Comments (RFC) seeking input from market participants to inform the solicitation requirements, network structure, technical specifications, evaluation metrics, and any other topics that will be instructive to facilitating a competitive solicitation.[9] The RFC was widely disseminated to different industry sectors, public agencies and community-based organizations. Written submissions were received from various entities, including service providers, equipment providers, community-based organizations, consortia, constituents, and an academic institution.[10] In parallel, ISD's consultant outreached directly to 38 active firms in the broadband industry to conduct market research interviews. All of the information obtained facilitated the development of a formal Request for Statement of Qualifications (RFSQ).

On March 21, 2022, the RFSQ was released to establish a shortlist of companies deemed qualified to deliver Community Wireless Networks. The solicitation required that respondents be able to provide high-speed, high-quality broadband internet service to each subscriber residence using wireless technology, fiber or a combination of both.

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[9] County of Los Angeles Community Wireless Network Pilot: Request for Comments
[10] County of Los Angeles Community Wireless Network Pilot: RFC Written Submissions

On July 13, 2022, ISD released an addendum to the RFSQ clarifying that proposals for fiber-specific solutions are accepted and will be fairly considered. Additionally, references to "Community Wireless Networks" were changed to "Community Broadband Networks". Notification of the addendum was widely distributed to registered vendors, industry sources, and via social media. The solicitation is open ended such that vendors can submit statements of qualifications at any time. Should any additional vendor submit a response to the RFSQ, the company will be subject to the RFSQ requirements and evaluation process to determine whether or not it will be recommended for inclusion on the shortlist.

As of the date of this report, ISD has received 12 responses to the RFSQ. The respondents proposed different wireless technologies as well as fiber solutions. Some proposals include cost models with capital investments that may be financially advantageous to the County. Consequently, there is a potential for economies of scale to deliver broadband internet service to multiple communities at relatively lower costs than initially projected.

On August 31, 2022, ISD is tentatively scheduled to present the recommended shortlist of companies and negotiated master agreements at the public meeting of the CEO Operations Cluster. The shortlist and master agreements are only for the purpose of establishing companies deemed qualified to deliver Community Broadband Networks. This phase of the process is not an indication or assurance that any particular company on the shortlist will be selected as a Managed Service Provider. After review by the Operations Cluster, the item will advance to the Board of Supervisors for final consideration and approval.

In the interest of keeping the public informed about the County's efforts to accelerate digital equity, ISD will launch a redesign of the Delete The Divide website in September 2022. The website will continue its primary purpose as a hub for program offerings in technology to empower youth, young adults and small businesses located in underserved communities impacted by the digital divide. However, the new website will be expanded to serve as a central source of information regarding the Community Broadband Networks as well as other digital equity initiatives.

4(c) Solicitation for Public-Private Partnerships

In coordination with the above-mentioned RFSQ and shortlist process, ISD will seek approval from the Board of Supervisors to administer competitive work order solicitations to deploy Community Broadband Networks. Only the shortlisted companies with an executed master agreement will be eligible to bid on a work order solicitation. Shovel-ready projects and cost estimates will be identified through the competitive work order solicitation process.

The County is prepared to administer multiple work order solicitations over time. Several factors are considered in determining which neighborhoods are best suited for Community Broadband Networks. These factors include, but are not limited to:

- *Level of Internet Adoption.* Neighborhoods with among the lowest levels of internet adoption, including households that do not have a home internet subscription or are only connected through mobile devices.

- *Availability of Public Assets.* County and partner agency assets such as buildings and street poles are essential to facilitating the deployment of a Community Wireless Network. Thus, the County will consider neighborhoods where critical assets are readily available.

- *Equity and Inclusion.* Neighborhoods that align with the objectives of the County's Anti-Racism, Diversity and Inclusion Initiative.

The RFSQ identified seven prospective demonstration neighborhoods that meet the above-mentioned criteria – Boyle Heights, East Los Angeles, Pico-Union, Panorama City, South Los Angeles, Sun Valley-North Hollywood, and Watts-Willowbrook. Networks are not limited to these neighborhoods and other neighborhoods can be proposed at the County's discretion. ISD has been in communication with each Board Office to prioritize potential project locations.

4(d) Funding for Community Broadband Network (previously "Wireless Network")

On November 15, 2021, President Joe Biden signed into law the $1.2 trillion Infrastructure Investment and Jobs Act (IIJA). The law appropriates $65 billion for broadband improvements. The primary purpose is to build internet infrastructure across the nation, create more low-cost internet service options, and address digital equity and inclusion needs in underserved communities. The funding will be administered through federal and state agencies, and mostly through grants that will sunset within 5 years or sooner if available funds are expended.

IIJA funding is grouped into 7 major program areas:

Broadband Equity, Access, and Deployment Program $42.45 billion

Grant program to states, territories and the District of Columbia primarily for the purposes of state broadband planning and deployment. It can also be used for broadband data collection and mapping; to promote broadband adoption, including the provision of affordable internet-connected devices; to provide Wi-Fi or reduced-cost internet access to multi-family housing units; and for other uses that the National Telecommunications and Information Administration (NTIA) determines are necessary to facilitate the goals of the program. States will distribute funds through a competitive grant program. Each state will receive at least $100 million. The remainder of the funds will be allocated based on a formula that considers the

number of locations in each State or territory unserved by broadband and the number of high-cost unserved locations.

<u>Affordable Connectivity Program</u> $14.2 billion

Subsidy of up to $30/month for low-income families (up to $75/month for low-income families on Tribal Lands) to use toward the internet service plan of their choice offered by participating internet service providers, as well as a one-time $100 towards a desktop, laptop or tablet computer offered by participating internet service providers.

<u>Digital Equity Planning, Capacity and Competitive Grants</u> $2.75 billion

Grant programs to plan for and then promote digital inclusion and equity for communities that lack the skills, technologies and support needed to take advantage of broadband connections. Grants can be used to accelerate the adoption of broadband through digital literacy training, workforce development, devices access programs, and other digital inclusion measures.

<u>Tribal Broadband Connectivity Program</u> $2 billion

An existing program that provides grants to federally recognized Tribal governments, Tribal organizations, Tribal Colleges and Universities, the Department of Hawaiian Homelands, and Alaska Native Corporations for broadband deployment on Tribal lands, as well as for telehealth, distance learning, broadband affordability, and digital inclusion.

<u>Broadband ReConnect Program</u> $2 billion

Loans and grants toward the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas. Companies, cooperatives, and state, local, Tribal, and territorial governments may all apply.

<u>Middle Mile Broadband Infrastructure Program</u> $1 billion

Grants for the construction, improvement or acquisition of middle-mile infrastructure to eligible entities, including but not limited to, telecommunications companies, technology companies, electric utilities, and utility cooperatives.

<u>Private Activity Bonds</u>   ~$600 million

States and local governments are allowed to issue private activity bonds to support broadband deployment in rural areas.

The County of Los Angeles will be eligible to apply for certain IIJA competitive grants for broadband technical assistance and infrastructure projects. The major grants of interest have varying filling periods and criteria. Additionally, the State of California offers grants for broadband technical assistance and infrastructure projects through the California Advanced Services Fund program.

Specific to grants for broadband infrastructure, both the NTIA and California Public Utilities Commission (CPUC) have issued public statements that funding preferences will be for projects utilizing fiber technology.

The CPUC established the Local Agency Technical Assistance (LATA) grant program to support government entities with eligible pre-construction work that facilitates broadband network projects benefitting areas in need. Pre-construction costs may be tied to a broadband infrastructure project designed to provide service to unserved or underserved households and businesses, and that are designed to, upon completion, reliably meet or exceed symmetrical download and upload speeds of 100 Megabits per second. Local government agencies in California are authorized by law to provide broadband service.

The LATA grant program has a $50 million budget for eligible local agencies and tribal entities in California. Grantees may receive up to $500,000 per fiscal year for reimbursement of eligible costs; a government entity may apply for a grant up to $1 million per fiscal year, which will be subject to a Commission determination via resolution following a 30-day public comment period. Examples of reimbursable expenses include consultant or staff time for conducting needs assessments, market studies, environmental studies, engineering studies or reports, network design, broadband strategic plans, business plans, and community-based organization services. Grants are awarded on a first-come, first-served basis until funding is exhausted.

On August 1, 2022, the CPUC began accepting applications for LATA grants.

On August 8, 2022, ISD applied for a LATA Grant to facilitate implementing Community Broadband Networks in parts of East Los Angeles, South Los Angeles and adjacent unincorporated areas. Pursuant to grant guidelines, applicants are required to submit a letter of support demonstrating collaboration between overlapping local agency jurisdictions. ISD's application included letters of support from Los Angeles Mayor Eric Garcetti, General Manager Miguel Sangalang of the City's Bureau of Street Lighting, and Dr. Debra Duardo, Superintendent of the Los Angeles County Office of Education. As discussed in previous progress reports, the County of Los Angeles, City of Los Angeles, and Los Angeles County Office of Education signed a Memorandum of Understanding to work collaboratively towards digital equity and ensure that constituents have access to reliable high-speed internet. All three agencies agree to deploy their competitive advantages (including assets and operations) to bring new public connectivity infrastructure to communities and encourage collaboration of projects and funding opportunities.

The CPUC expects to review LATA grant applications on a monthly basis. If awarded a grant, the County of Los Angeles would be reimbursed for some of the applicable pre-construction costs of Community Broadband Networks in the East and South Los Angeles areas.

As new grant opportunities become available, the County will need to be efficient in its administrative review and approval processes to ensure the timely submission of grant applications. The County will also need dedicated program staff to oversee grant applications, project deployment and grant management compliance.

4(e) Feasibility Study for County-Administered Broadband Service

The Board of Supervisors approved delegated authority for the CEO to hire a consultant to conduct a financial and technical feasibility study for a County-administered municipal broadband service. The study allows for an assessment of capital costs and consumer pricing models that will enable reliable high-speed internet access for households in digital divide target areas. The study also allows for consideration of existing County assets and licensing agreements as well as the utilization of public and private fiber optic and wireless network infrastructures that can be included in the County-administered strategy.

The CEO is evaluating proposals for a feasibility study for County-administered municipal broadband services in the five communities of highest need as identified using the County's Equity Tool:

Community	Total households	Households w/o Internet		Households w/o computer		SVI	JENI	JESI	COVID impact
Unincorporated East LA	30,723	8,488	27.6%	4,277	13.9%	High-Highest	Moderate - Highest	Low - Highest	High-Highest
Los Angeles - Westlake	22,662	7,244	32.0%	2,498	11.0%	Moderate - Highest	Moderate - Highest	Moderate - Highest	Moderate - Highest
Los Angeles - Pico Union	12,515	3,835	30.6%	1,355	10.8%	Highest	Low - High	Low - High	Highest
Los Angeles - Watts	10,512	3,088	29.4%	1,299	12.4%	Highest	Moderate - Highest	Low - Highest	Highest
Los Angeles - Crenshaw	5,570	1,501	26.9%	613	11.0%	Low - Highest	Low - Highest	Low - Highest	Low - Highest

Note:

SVI - Social Vulnerability Index based on 15 census variables grouped in four themes; socioeconomic status, household composition, minority status and language, housing and transportation.

JENI - Justice Equity Need Index used to assess areas most negatively impacted by criminalization and detention-first policies.

JESI - Justice Equity Service Index used to identify needs for justice-related community-based supports and services in low to highest service areas to inform where to shift investments and capacity-building supports towards equity and justice.

The feasibility analysis of each of the five communities, shall include:

- *A market analysis* to serve as the basis for determining penetration and adoption rates, foreseeable competition, and sensible pricing for services provided.

- *Service and infrastructure analysis* of the incumbent Internet service providers (ISPs) and existing broadband infrastructure within the communities of need. Analysis should identify service models that could be utilized in the region. Outcomes will include GIS maps detailing the physical extent of fiber-optic lines, service areas, incumbency, and level of service provided.

- *Site analysis* to discover whether existing public assets and/or land can be used to better facilitate network construction and operation and availability of public and private fiber optic and wireless infrastructure. Includes a cost model for the

network, including one-time and ongoing capital expenditures, operations, network operations, field services, staffing, billing, and customer service. The analysis will also delineate items such as customer growth rates, competitive pricing schedules, and overall financial sustainability.

- *Program and Financial Analysis* of financing options that are available to the region for funding the construction, implementation, and subsequent operation of the broadband infrastructure and services.