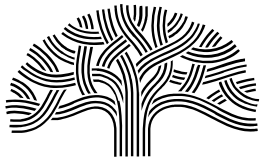


2025 City Broadband Master Plan

Information Technology Department

Informational Report Presented to the
Finance & Management Committee on
April 22, 2025



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Background & Legislative History

- In December 2022, the City Council authorized the acceptance of a Local Agency Technical Assistance (“LATA”) in the amount of \$500,000.
- In December 2024, ITD submitted the BMP to CPUC to successfully fulfill the LATA grant terms.
- The BMP is a 102-page document that analyzes the “digital divide” in Oakland; discusses the City’s successful \$15.5 million CPUC Last-Mile grant application; and presents a long-term vision for a City-run Municipal Broadband Network.



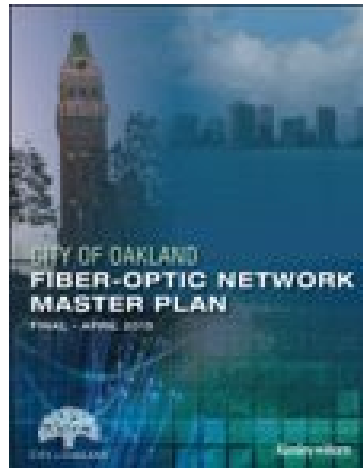
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BMP Overview: A Plan Years in the Making

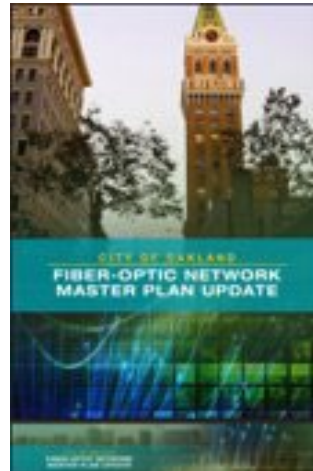
2025 Broadband Master Plan

1. Section 1. Introduction
2. Section 2. Broadband Master Plan Overview
3. Section 3. Community Voices
4. Section 4. The Challenge: Digital Exclusion in Oakland
5. Section 5. Municipal Broadband Networks: A Primer
6. Section 6. Current State of Public Broadband Infrastructure in Oakland
7. Section 7. Advancing a Solution: OaklandConnect
8. Section 8. Recommendations

2015 Fiber-Optic
Network Master Plan



2019 Fiber-Optic
Network Master Plan Update



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Separate and Unequal: Oakland's Digital Divide

33,000
Oakland
Households
without home
internet

ACS Internet Connectivity



Figure 1: American Community Survey (ACS): Internet Connectivity Map

Results of School Digital Needs Assessment "Tech Check"

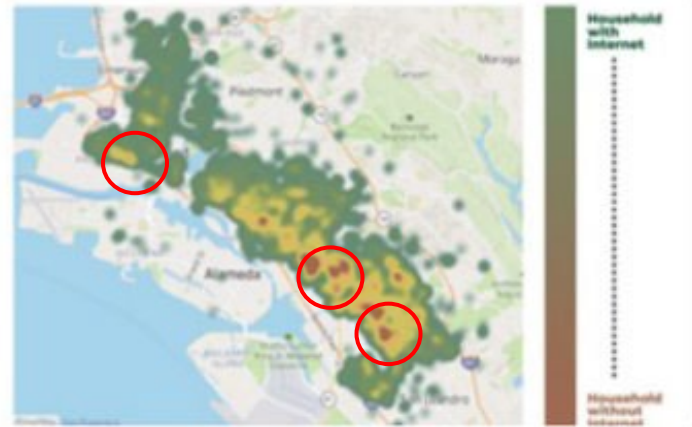


Figure 2: Oakland Unified School District (OUSD): Tech Check Survey Map



Methods: Grounding in Lived Experience

COMMUNITY VOICES

"Sometimes you find an affordable plan [but] this provider can't reach your area for some reason."

"It is sometimes slow so I upgraded to fast, but it still cuts off out of nowhere, so it is still not that great."

"My home internet at times is not very secure because occasionally we lose signal and I have to contact the company to resolve that so that my daughters can finish their school work."

"...intenté [instalar internet] con [compañía de internet] pero no hay cobertura y [mi proveedor] era la única opción porque si realmente necesito y dependo de internet en casa."

"...I tried [to install internet] with [unnamed internet company] but there's no coverage there and [my current provider] was the only option I have because I really need and depend on home internet."

"I'm disappointed most of the time with my internet service."

"My experience with the internet is a little difficult. I sometimes feel that internet companies provide you with the same speeds regardless of the price you pay"

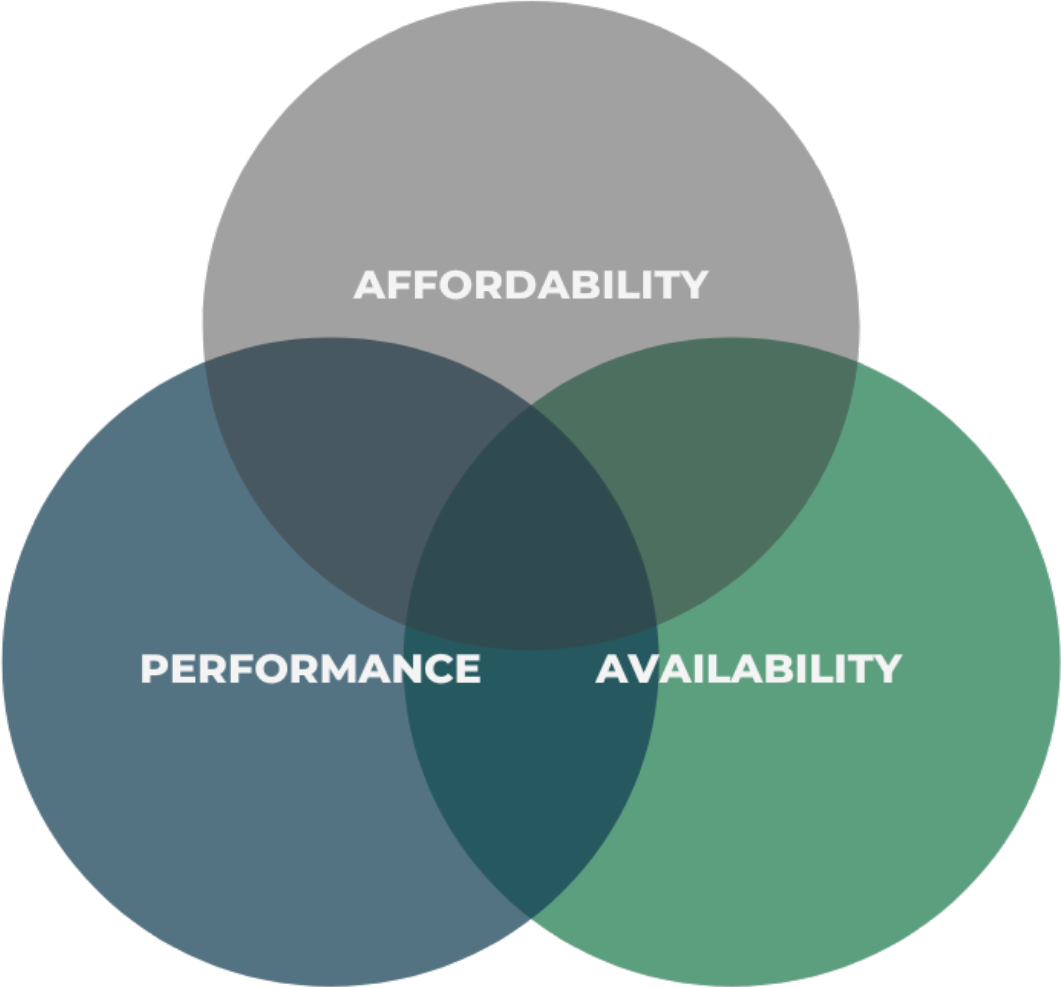
BY THE NUMBERS

- >50,000 Integrated Surveys
- >1,000,000 Internet speed tests at 18,000 unique locations
- >100 Internal Wiring Inspections
- >20,000 Phone Banking Interactions
- 65 Formal Reports of Anticompetitive Practices at Large MDUs



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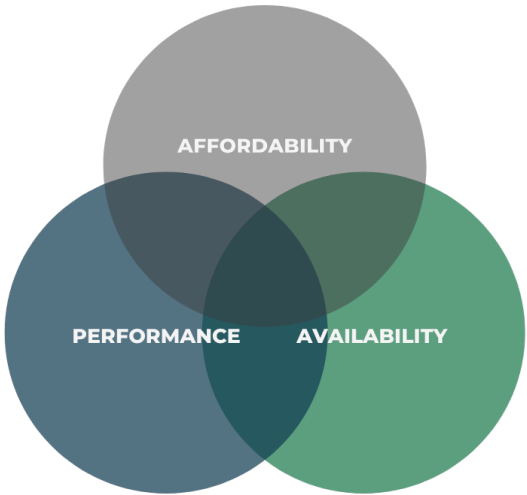
Grounded in Truth: Cause of Digital Divide



Barriers to Broadband

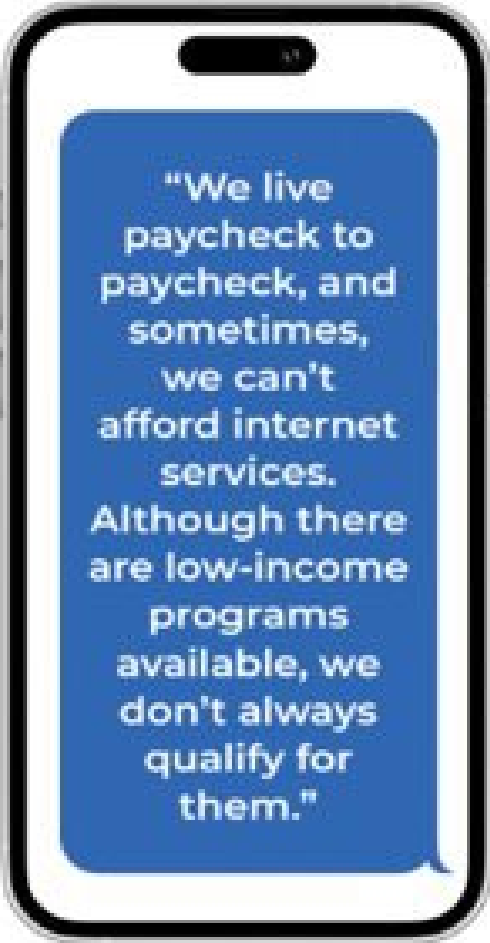


Barrier #1: Affordability

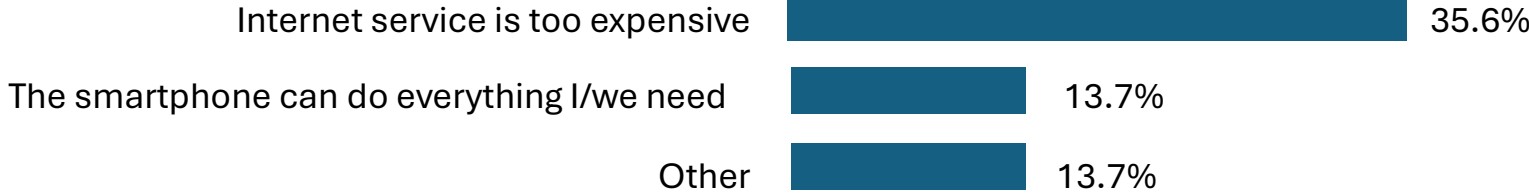


Barriers to Broadband

\$86.50/month
Average Bay Area
Monthly Internet Costs

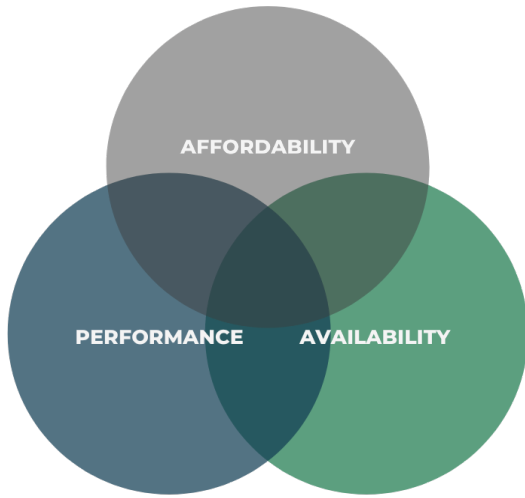


Top Reason Why no Connected (Single Response)



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Barrier #2: Performance

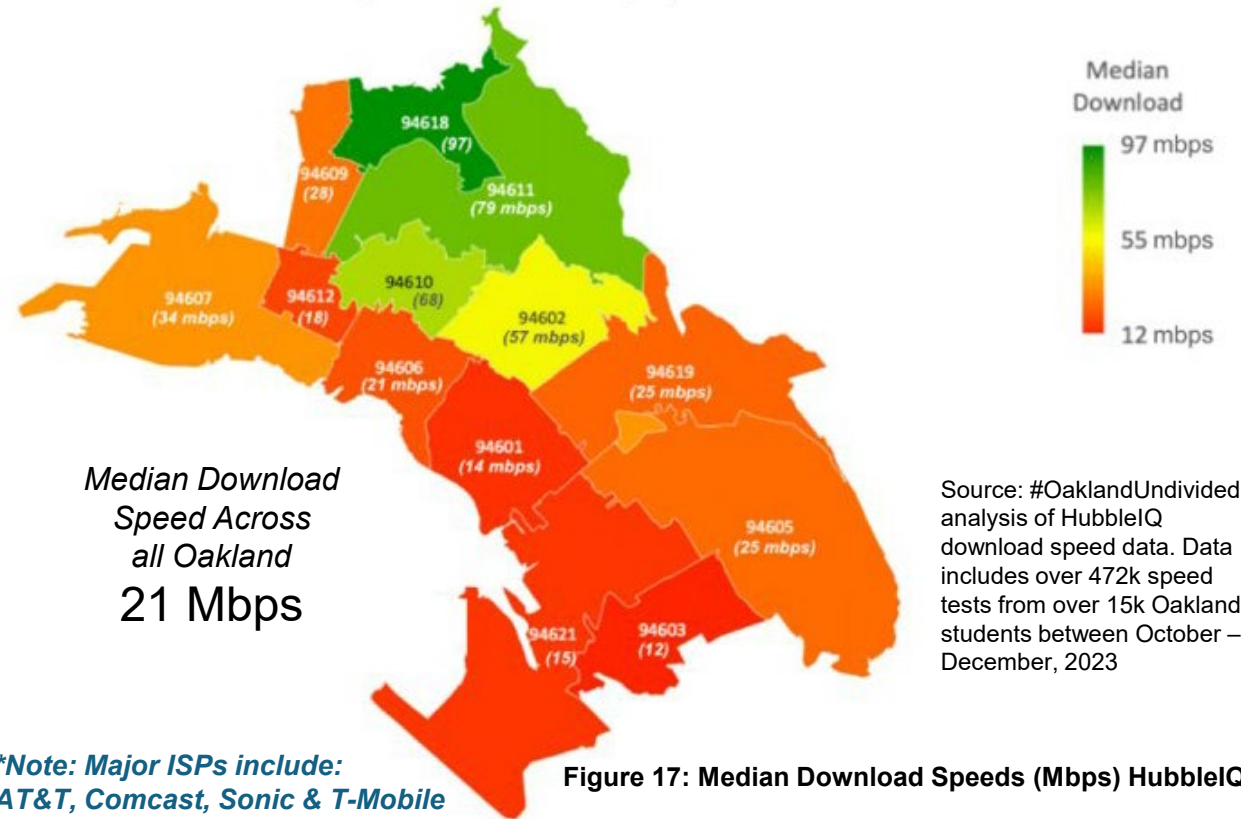


Barriers to Broadband



Median Download Speed (Mbps)

All Major ISPs* in Oakland by Zip Code



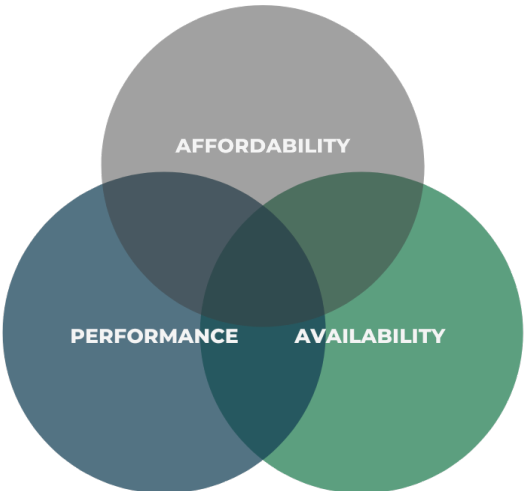
Source: #OaklandUndivided analysis of HubbleIQ download speed data. Data includes over 472k speed tests from over 15k Oakland students between October – December, 2023

Figure 17: Median Download Speeds (Mbps) HubbleIQ Data

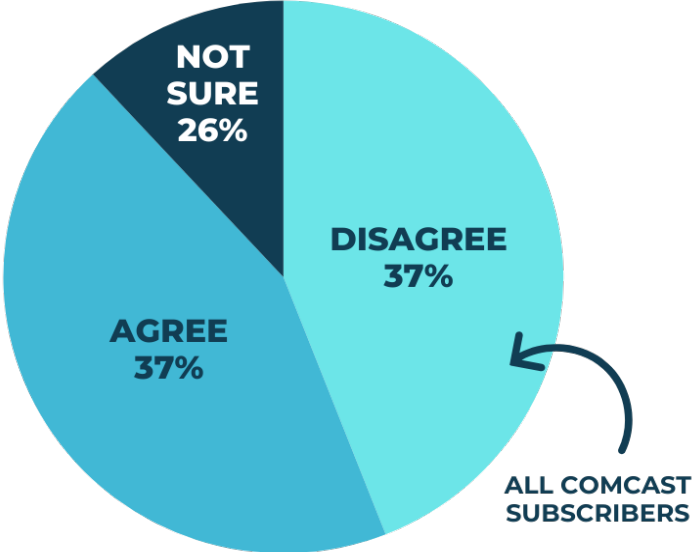


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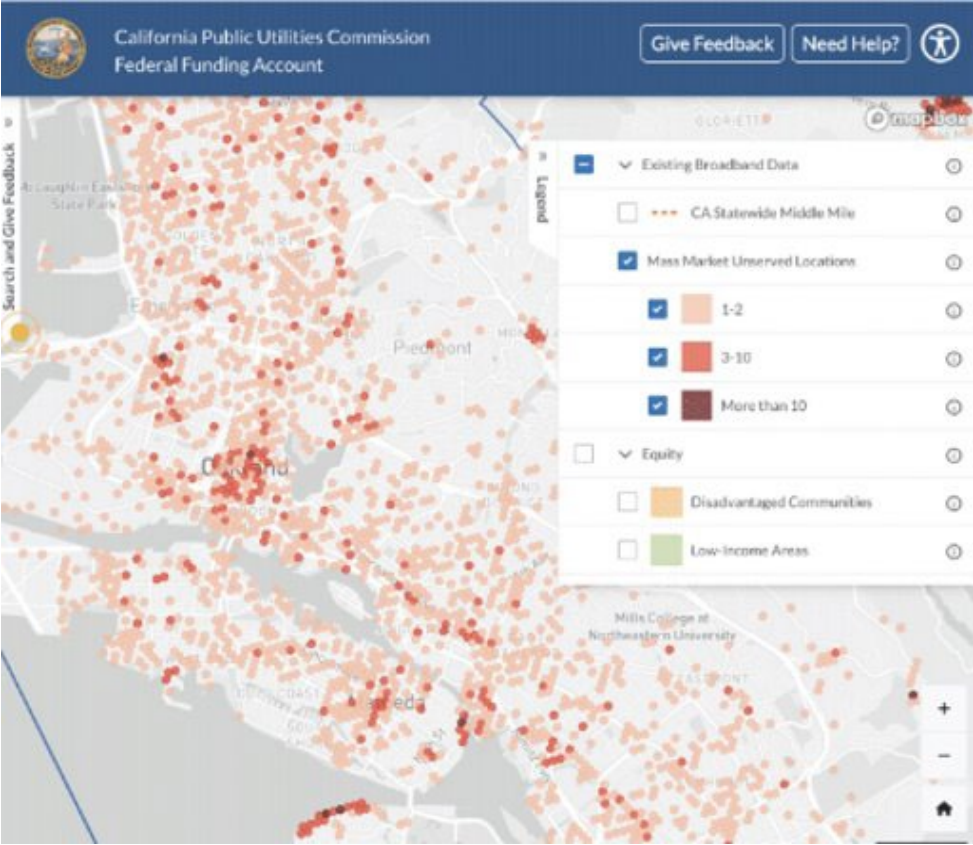
Barrier #3: Availability



Barriers to Broadband



Question: I have different service providers (i.e. Comcast, AT&T, Sonic) that I can choose from.



Coalition + Infrastructure = Access

WHO PARTICIPATES:

- The City
- Civic & Elected Leaders
- Trusted CBO Partners
- Community Anchor Institutions
- Local, State, and Federal Partners & funding programs
- Industry and Labor Partners
- And, most importantly, community
- #OaklandUndivided

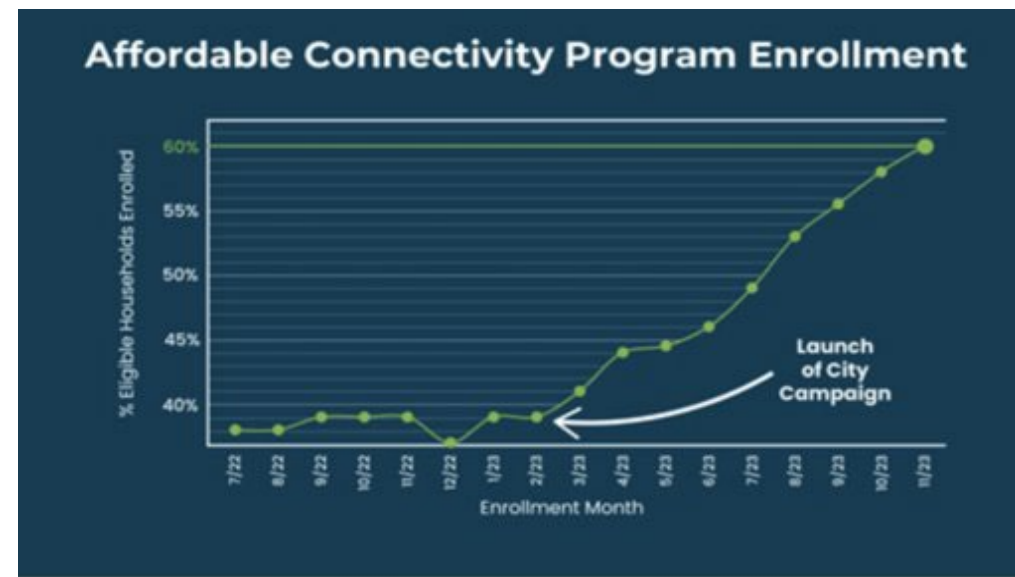


Figure 12: ACP Enrollment in Oakland, CA (7/22-11/23)

A Case for Municipal Broadband Networks

Work

Facilitates job search, application, training, and hiring.

Work from anywhere, telework, increased productivity



Education

Increases access and outreach to endless information resources.

Remote education, skill sharing, academic collaboration



Economy

Fosters growth, competition, and enhances productivity.

E-commerce, online business, globalization



Healthcare

Streamlines healthcare management and clinical information exchange.

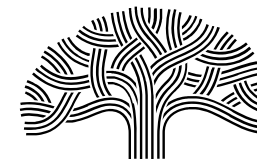
Patient-centered care, telehealth



Government

Improves access to services, streamlines transactions, eases platform sharing and news dissemination. Supports emergency services and connections with citizens.

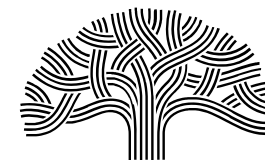
Activism, national security, public safety



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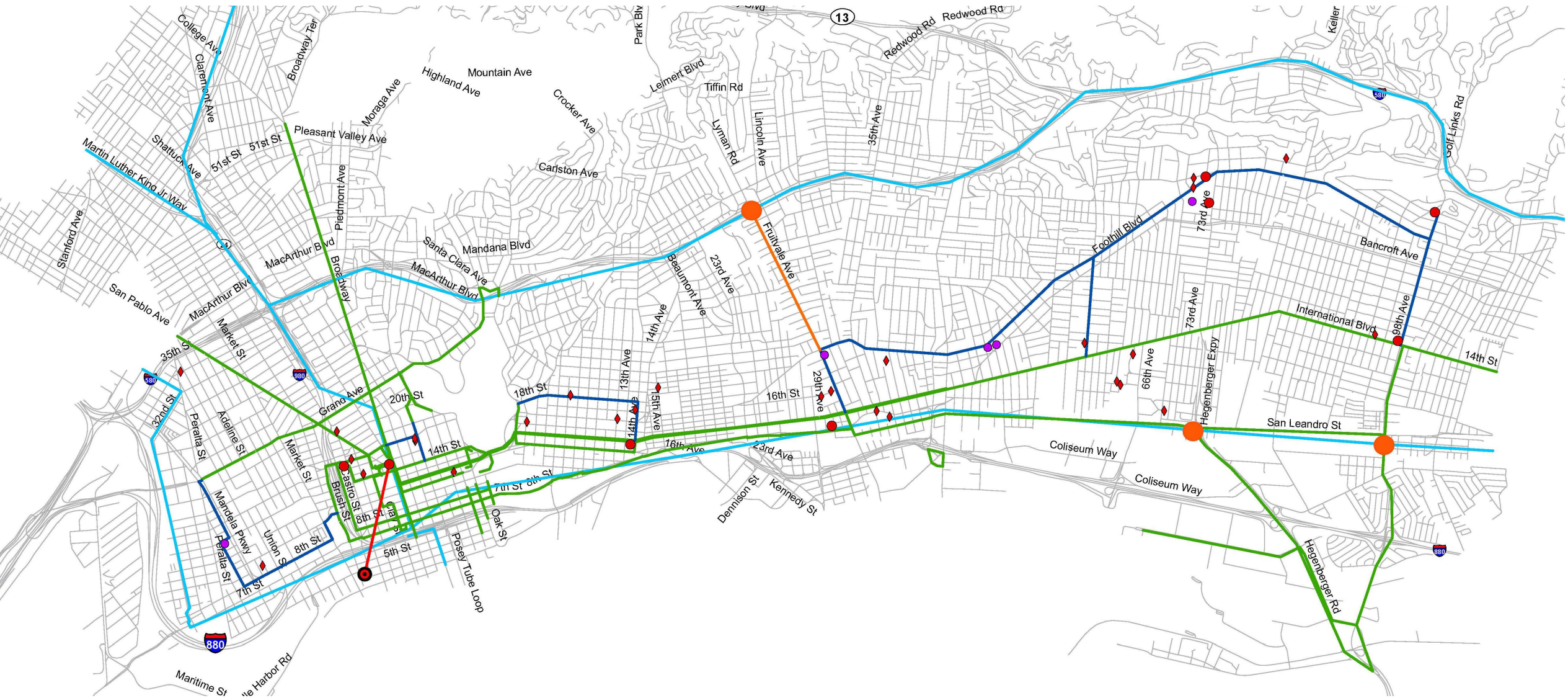
“OaklandConnect”: CPUC Grant Project

- In September, 2023, ITD submitted a grant project as part of the CPUC Last-Mile grant program
- Construct **20 miles of hybrid middle/last mile fiber**, primarily in Oakland's least-connected communities
- Connect **14 Community Anchor Institutions** and **9 Public Safety Buildings**
- Provide free or low-cost internet for **~2,500 Affordable Housing Units**
- Increase **capacity** and improve **reliability** of municipally-owned fiber network
- In September 2024, City Council accepted CPUC award for \$14M with up to \$2M match from Measure U bond funds for a total of up to \$16 million



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OaklandConnect as Submitted to CPUC



OaklandConnect Timeline & Next Steps

Approved & In-Progress

- Agreement with Kimley-Horn for Design & Engineering Phase

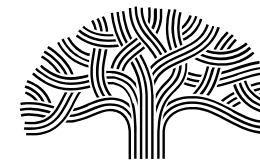
Coming Soon

- Agreements with affordable housing providers and property owners for grant-funded construction and equipment
- Public-Private Partnership Agreements with Internet Service Providers to provide free or low-cost Internet Service on the Network
- Construction Agreement to construct the fiber optic network

Timeline for Agreements for Council Consideration

- 3-9 Months

1.	Design & Engineering Phase <ul style="list-style-type: none"> ▪ Finalize Routes & Repairs ▪ Finalize OHA and City CAI properties, agreements ▪ Finalize Network requirements and design 	Summer 2025
2.	Construction Phase <ul style="list-style-type: none"> ▪ Public Works Bidding ▪ Contract execution ▪ Traffic Plans, USA Marking ▪ Inspections and final sign off 	12-18 Months
3.	Public Private Partnerships with ISPs <ul style="list-style-type: none"> ▪ Identify wireless and wireline partners with shared interest in digital equity ▪ Execute agreements for broadband infrastructure access, including revenue and fee structure ▪ Include ISP requirements in network design 	6 Months
4.	Go-Live & Public Outreach <ul style="list-style-type: none"> ▪ Work with City Communications on public outreach, including social and print media ▪ Consider additional surveys or workshops to further raise awareness ▪ Support ISP partners with marketing plans 	Dec. 2026
5.	Ongoing Maintenance <ul style="list-style-type: none"> ▪ Work with City Communications on public outreach, including social and print media ▪ Consider additional surveys or workshops to further raise awareness ▪ Support ISP partners with marketing plans 	2027+



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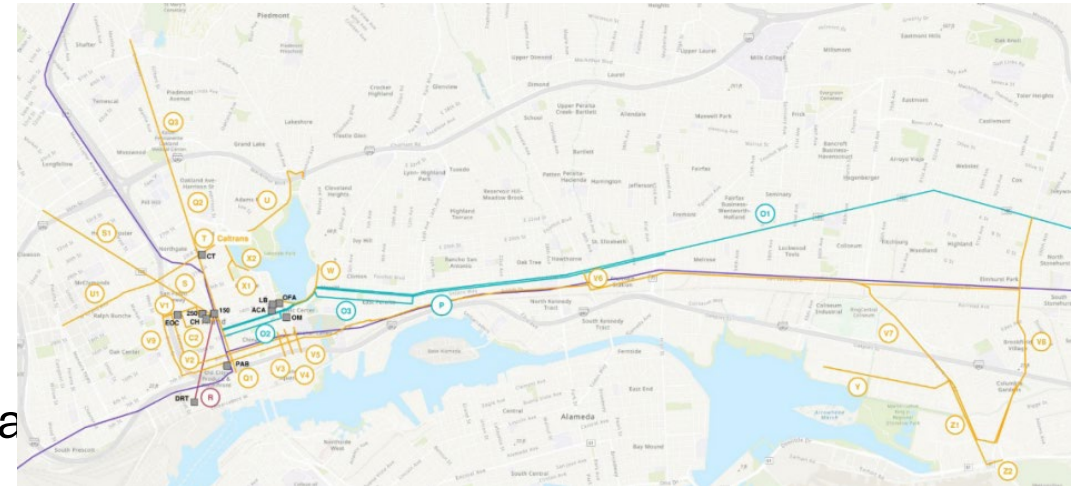
BMP Findings for Opportunities

Existing Fiber

- Built “ad-hoc” without a broadband focus
- Limitations with maintenance and conditions

Planned and Future CIP Projects

- 8 CIP projects planned with fiber optic additions that can be integrated into a unified network



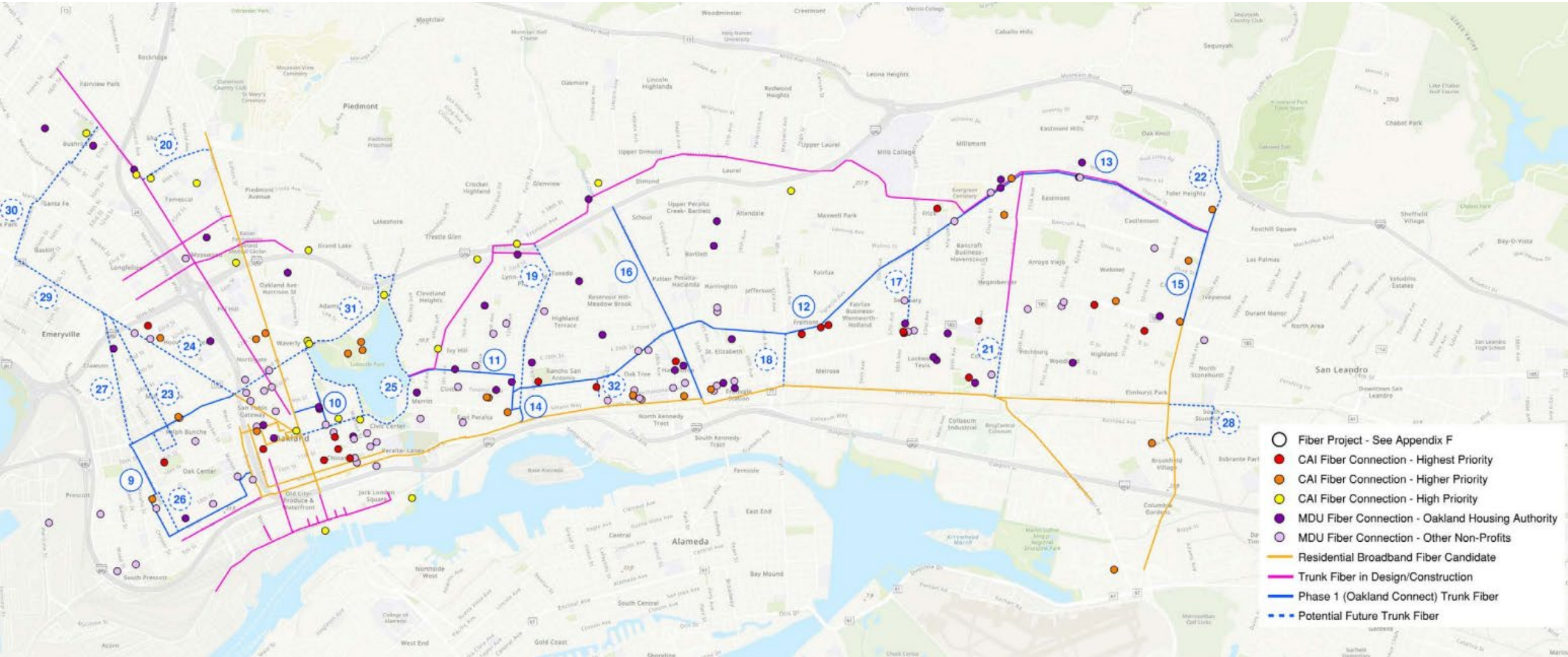
Maintenance

- BPM identified need for ongoing Citywide fiber maintenance and operational plans and procedures



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Future Unified Broadband Network



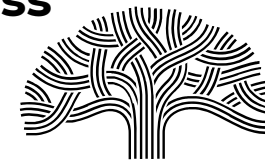
Broadband Master Plan Recommendations

Municipal Broadband Strategic Recommendations

1. Build the OaklandConnect Municipal Network
2. Integrate Planned and Future City fiber project with Oakland Connect MBN
3. Utilize OaklandConnect for Municipal Network Transport Services
4. Develop an Open Access Middle Mile Policy
5. Develop a Rooftop Access Policy
6. Develop a "Dig Once" Policy
7. Restore OakWiFi and Explore Connecting Public Spaces
8. Coordinate with the State on the Middle Mile Initiative
9. Develop Maintenance and Operations plans/procedures
10. Track & Pursue Federal & State Funding Opportunities

Digital Equity Strategy Recommendations

- 1. Sustain the Digital Equity Ecosystem in Oakland***
- 2. Enhance & Strengthen City Policies to Expand Internet Access**
- 3. Support State & Federal Digital Equity Policies**



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LEARN MORE

The 2025 City of Oakland Broadband Master Plan discusses all this and more – visit the website (below). Please contact Broadband@oaklandca.gov with questions or feedback.

The Full 2025 Broadband Master Plan will be published online at

OAKLANDCA.GOV