

Date: January 2, 2024

To: Thomas B. Modica, City Manager 

From: Lea D. Eriksen, Director of Technology & Innovation   
Eric Lopez, Director of Public Works   
Bo Martinez, Director of Economic Development 

For: Mayor and Members of the City Council

Subject: Update on Citywide Fiber Network Infrastructure Initiative

---

This memorandum provides a recap of the City of Long Beach's (City) High Tech Infrastructure Plan and an update on the Citywide Fiber Network Infrastructure Initiative.

## **Background**

In a [memorandum dated March 4, 2021](#), an update was provided to the City Council on the City's High Tech Infrastructure Plan (Plan) and the Citywide Fiber Network Infrastructure Initiative. The Fiber Network Infrastructure Initiative was initially approved by City Council as part of the Critical Needs in Technology Program in December 2017 to interconnect City buildings to: (1) save on current and future communication costs and establish a citywide fiber backbone that will enable the City to continue to grow (e.g., more bandwidth, new buildings), (2) be resilient (e.g., redundant paths, cyber protections, adapting to climate changes), and (3) improve access for private Internet and Cellular Service Providers (Service Providers) to reach unserved and underserved areas. The Citywide Fiber Network Infrastructure initiative establishes a fiber backbone and lateral network to connect City buildings and bring the fiber path within one and one half (1.5) miles of any location within the 52 square-mile City.

## **Design and Construction of the City's Fiber Network**

The COVID-19 Pandemic hindered the progress of this project, but the project was resumed in 2022 when staff returned to the City Council to expand the agreement with The Broadband Group (TBG), our fiber planning consultant, to assist in the next steps needed for the Engineering and Construction phases of the network infrastructure, including a more detailed field survey, testing, and analysis of the City's existing fiber infrastructure. In 2022, staff also provided updated presentations to the City's Economic Development and Technology and Innovation Commissions on the City's fiber network planning. In 2022, TBG worked with the City to establish a Joint Fiber Steering Committee to lead the project, composed of the directors of Technology & Innovation (TI), Public Works (PW), and Economic Development (ED) Departments, as well as the Infrastructure Services Bureau Manager of TI. The Steering Committee then appointed a Fiber Core Team, composed of subject matter experts from TI and PW, to work with TBG on the Survey, Detailed Engineering, and preparation of a Construction Bid Package. Those steps are nearly completed, and staff are poised to release an Invitation to Bid next month and will return to the City Council in early 2024 for financing and construction awards resulting from these processes. The City has been approved to finance the Fiber

Initiative as part of the Critical Needs in Technology Plan and the funding to pay the anticipated debt service for the fiber network is included in the TI General Services Fund budget.

<b>Next Steps</b>	<b>Anticipated Timeline</b>
Finalize Bid Package PlanCheck Review Publish Invitation to Bid	Q1 2024
Bids Closed Council Awards Financing & Construction	Q2 2024
Bonds & Agreements Notice to Proceed	Q3 2024

In the meantime, ED, PW, TI, and TBG are working closely to align on immediate Dig Once opportunities, incorporate Digital Inclusion Roadmap recommendations, and coordinate planned road work with construction of the fiber network. Specifically, the street improvement projects on Santa Fe, Artesia, Market, and Studebaker roads have all been designed to include conduits that have been stubbed out to City facilities along these routes for future use in the City’s expanded fiber network, likely savings millions in future construction costs.

Through ongoing investment and Dig Once opportunities that are already in process, the City’s existing fiber network infrastructure will be approximately 64 route miles in length. The existing fiber network provides high-speed connectivity to about 37 percent of City-owned facilities, as well as some network cameras, public Wi-Fi locations, and traffic signals. A map of the City’s current fiber network can be found in Attachment A, and a list of City locations connected to the network can be found in Attachment B. A map of the planned fiber network expansion is also contained in Attachment A. This includes an additional 35 route miles of fiber in new or existing conduit, which after completion would result in ultra-high-speed fiber connectivity to approximately 89 percent of City-owned facilities.

### **Digital Inclusion and Grant Funding Opportunities**

To further bridge the digital divide and help address historical inequities in digital infrastructure, the fiber conduits constructed in the fiber network expansion include additional capacity that can be offered to Service Providers. The City is working with TBG to develop a leasing structure and approach for sharing the conduits with Community Anchor Institutions, other jurisdictions, and Service Providers who can use them to provide additional digital connectivity services to organizations and residents throughout Long Beach. This will help the City achieve our economic development and digital inclusion goals.

In addition, the City is closely watching the Broadband Equity Access and Deployment (BEAD) and Digital Equity Act (DEA) funding to determine if the City could qualify for the grant funds to further expand the network to reach more areas most impacted by the digital divide.

## **Interim Telecom Expansions and Purchased Fiber**

In 2018, City Council approved extending and expanding existing Telecom Agreements with Frontier, Charter/Spectrum, and Verizon to enable continued delivery and enhancement of data communications for critical citywide projects under way. Currently, 66 percent of City buildings are served by these private fiber connections (Attachment B includes a list of all locations). TI returned to the City Council in fall 2021 to request a continuation of these Telecom Agreements until the expanded Citywide Fiber Network is completed and ongoing service levels are determined. The City has evaluated construction to some of these City locations on a case-by-case basis and, where appropriate, has considered purchasing fiber to these locations from the private sector, or will continue leasing fiber connections that were contracted in these previously-executed Telecom Expansions with Frontier, Charter/Spectrum, and Verizon. For example, non-City owned facilities will continue to receive services from these providers. In addition, the City has an agreement with Crown Castle for 3.6 route miles of fiber, most of which (3.0 route miles) the City plans to utilize as well.

Thank you for your continued support for this effort and for the work ahead. For questions about this update or other activities related to the Fiber Network Infrastructure Initiative, please contact Lea Eriksen, Director of Technology and Innovation, at (562) 570-6234 or [lea.eriksen@longbeach.gov](mailto:lea.eriksen@longbeach.gov), Eric Lopez, Director of Public Works at (562) 570-5690 or [eric.lopez@longbeach.gov](mailto:eric.lopez@longbeach.gov), or Bo Martinez, Director of Economic Development at (562) 570-5282 or [bo.martinez@longbeach.gov](mailto:bo.martinez@longbeach.gov).

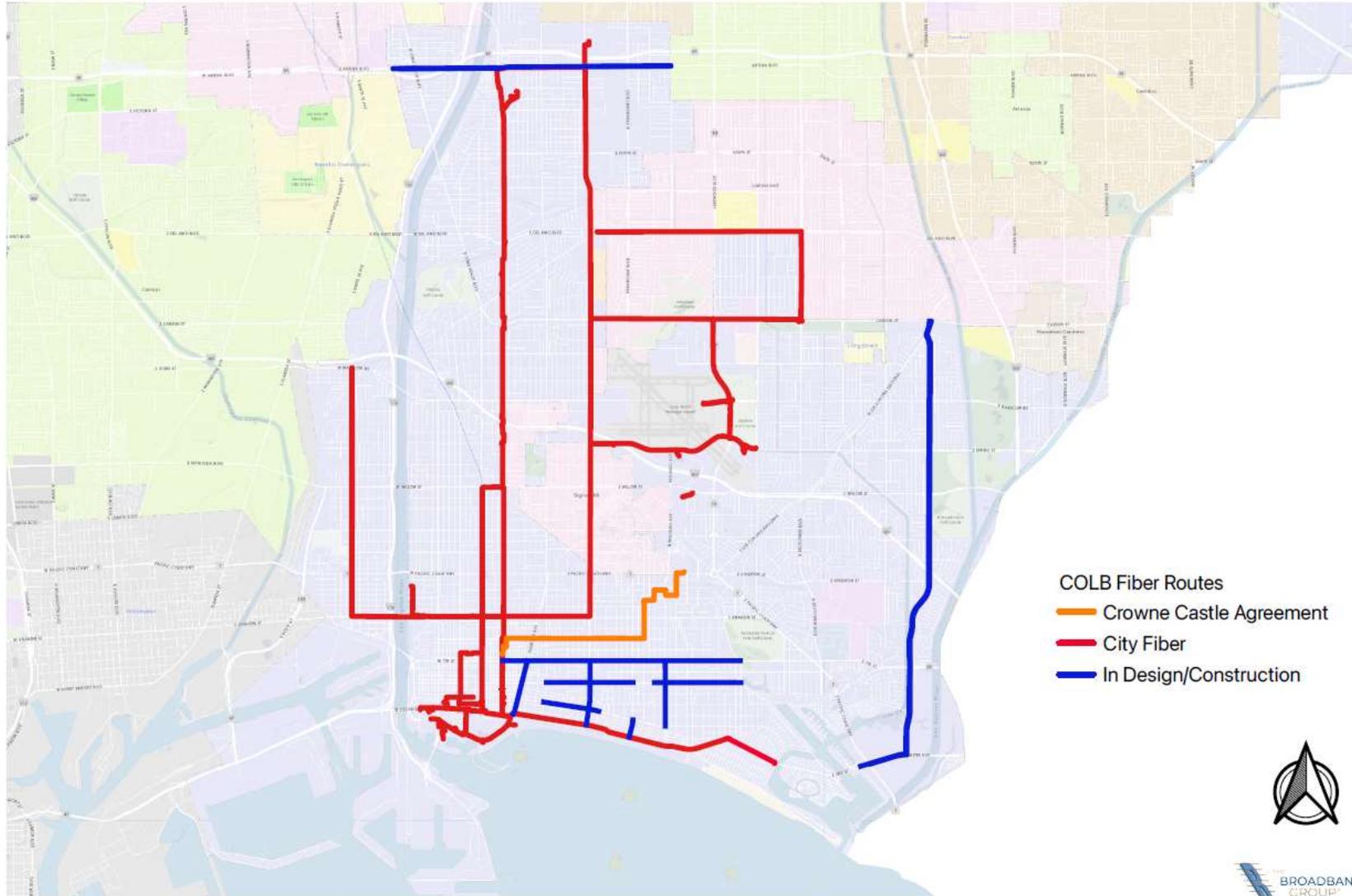
### ATTACHMENTS

CC: DAWN MCINTOSH, CITY ATTORNEY  
DOUGLAS P. HAUBERT, CITY PROSECUTOR  
LAURA L. DOUD, CITY AUDITOR  
APRIL WALKER, ASSISTANT CITY MANAGER  
TERESA CHANDLER, DEPUTY CITY MANAGER  
MEREDITH REYNOLDS, DEPUTY CITY MANAGER  
GRACE YOON, DEPUTY CITY MANAGER  
TYLER CURLEY, DEPUTY CITY MANAGER  
KEVIN LEE, CHIEF PUBLIC AFFAIRS OFFICER  
MONIQUE DE LA GARZA, CITY CLERK  
DEPARTMENT HEADS

# Attachment A – Current and Planned Conduit & Fiber Infrastructure

## 1. Current Infrastructure

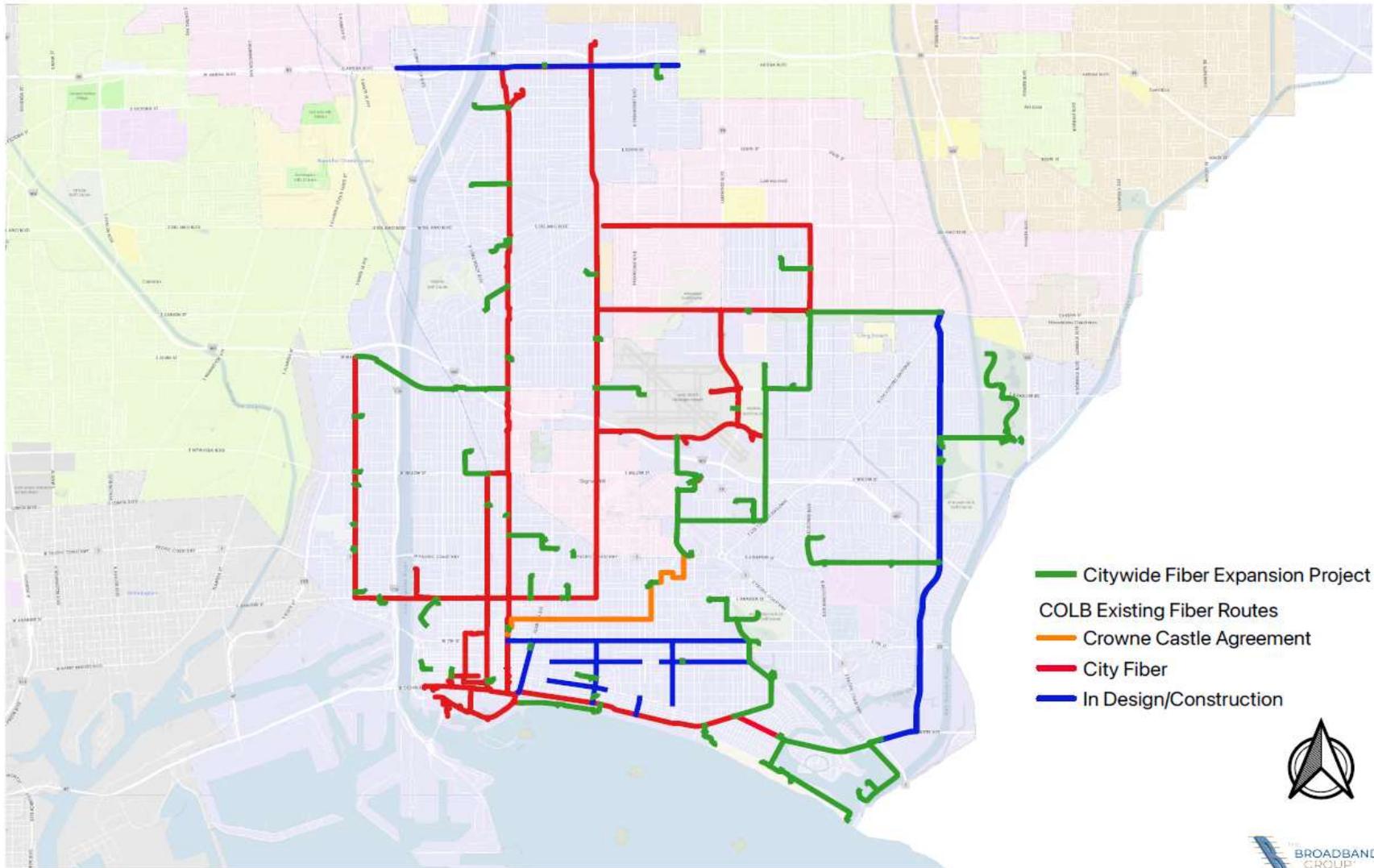
COLB - Existing Fiber including in progress projects



Updated December 2023 following Preliminary Field Inspections

## 2. Planned Infrastructure

### COLB - Proposed Citywide Fiber Expansion



Based on 100% Work Plan

## Attachment B Inventory of Fiber Connectivity to City Locations

### 1. Locations Already Connected to City of Long Beach or Port of Long Beach Fiber<sup>1</sup>

1	Alamitos Beach Concession
2	Airport
3	Aquarium Parking Structure
4	Billie Jean King Main Library
5	Bay Shore Library
6	Broadway Parking
7	Burnett Library
8	Career Transition Center / Youth Opportunity Center
9	City Hall
10	City Place Parking Structure
11	Downtown Marina
12	ECOC
13	Enviromental Services
14	Fire Headquarters / Heliport - Field Support
15	Fire Station 1
16	Fire Station 6
17	Fire Station 15
18	Fire Station 20
19	Fire Station 24
20	Fleet Services
21	Golder Shore Maintenance Yard
22	Houghton Park / North Facility
23	Energy Resource
24	LAZ Parking on 4th St
25	Long Beach Airport
26	Mark Twain Library
27	Michelle Obama Library
28	Police Headquarters
29	Port Security / JCCC
30	Public Service Yard
31	Ruth Bach Library
32	SERRF
33	Towing Operations / Lien Sales
34	Video Communications
35	Water Administration
36	Water Treatment

---

<sup>1</sup> The City and Port fiber networks cross-connect in the City Hall data center.

## Attachment B – Inventory of Fiber Connectivity to City Locations

Page 2

### 2. City Locations Connected by Fiber Service Providers (Telecoms Stopgap Agreements)

1	72nd Place Lifeguard Station	41	Forensic Science Service Lab
2	Airport Maintenance Yard - 3150 St Louis Ave	42	Housing Authority
3	Airport Operations\Security	43	Jr Lifeguard
4	Alamitos Bay Marina	44	LBCC - PCH- PD
5	Alamitos Library	45	LBCC- LAC - PD
6	Animal Care Services	46	Leeway Sailings
7	Beach Maintenance Yard - Belmont Pool	47	Los Altos Library
8	Beach / Lifeguard Headquarters	48	Main Health
9	Bixby Park	49	Mc Bride Park / California Recreation Community Center
10	Boat Operations - Marine Maintenance Yard	50	Miller Family Health Education Center
11	Bret Harte Library	51	Multi Serivce Center for the Homeless
12	Brewitt Library	52	North Division Substation
13	Cental Health Facility - CD 6	53	Orizaba Park Community Center
14	Cesar Chavez Park	54	Parks & Recreation Administration
15	College Estate Park	55	Police Academy
16	Coolidge Park Community Center	56	Property & Evidence Warehouse
17	Dana Library	57	Public Work Chester
18	District 8 Field Office	58	Pier Point Landing
19	District 9 Field Office	59	Ramona Park
20	Drake Park	60	Ranger Station
21	East Division Substation	61	Recreation Clubhouse - Aquatics & Sports
22	El Dorado Library	62	Senior Center
23	Fire Station 2	63	Signal Hill - Radio Facility
24	Fire Station 3	64	Silverado Park / Pool
25	Fire Station 4	65	Special Events & Filming
26	Fire Station 5	66	Stearns Park
27	Fire Station 7	67	Veterans Park
28	Fire Station 8	68	Wardlow Park - CD OFFICE 5
29	Fire Station 9	69	West Division Substation
30	Fire Station 10 - Fire Warehouse - Meseum	70	West Facility Center & Admiral Kid Park
31	Fire Station 11	71	Whaley Park
32	Fire Station 12	72	WIC north Office
33	Fire Station 13	73	WIC St. Mary Medical Center
34	Fire Station 14 - CD 3	74	Work Force Development
35	Fire Station 16	75	Worsham
36	Fire Station 17 - Fire Training	76	Youth Services
37	Fire Station 18	77	LAZ Parking Operations Downtown
38	Fire Station 19	78	ABC Shelter
39	Fire Station 21	79	Pacific Gateway 500 W Willow
40	Fire Station 22		

## Attachment B – Inventory of Fiber Connectivity to City Locations

Page 3

### 3. City Locations with No Fiber Connectivity (partial listing)

1	Cherry Park
2	De Forest Park Community Center
3	Dominguez Hills - Radio Facility
4	Graffiti Office
5	Homeland Cultural Center At McArthur Park
6	Leeway Lifeguard Station
7	Pan American Park
8	Recreation Park Community Center
9	Wardlow Park - CD OFFICE 5