



City Council Staff Report

From: City Manager
Report Type: **CONSENT CALENDAR**
Lead Department: **Utilities**

Meeting Date: **December 16, 2024**
Report #:2408-3377

TITLE

Approval of Contract C24191871 Amendment Number 1 Effective July 1, 2024 with Equinix, LLC in the Amount of \$1,246,793 to Extend the Term for an Additional 2 Years Through June 30, 2029 for Fiber Licensing Agreement (Attachment A); and Authorization to Increase Contingency Amount by \$75,000 for a Total Not to Exceed Amount of \$1,954,923; CEQA Status – Not a Project

RECOMMENDATION

Staff recommends that City Council:

1. Approve and authorize the City Manager or their designee to execute amendment number 1 to contract C24191871 effective July 1, 2024 with Equinix, LLC to extend the lease of fiber optic access and termination services at the Palo Alto Internet Exchange (PAIX) for an additional two years through June 2029 for a total not-to-exceed amount of \$1,246,793, broken down as follows:
 - a. \$396,135 to lease a fiber optic cage to support Fiber-to-the-Premises for an additional two years from July 1, 2027 through June 30, 2029;
 - b. \$850,658 to lease a fiber optic cage to support the City's dark fiber licensing program for five years from July 1, 2024 through June 30, 2029; and
2. Authorize the City Manager or their designee to approve and execute any amendments to the agreement for additional services that may develop during the license period for a total not-to-exceed amount of \$181,900 for FTTP (\$109,900) and the City's dark fiber licensing program (\$75,000).

BACKGROUND

The City of Palo Alto established a Fiber Optic Utility in 1996 following the design and construction of a dark fiber optic backbone system throughout the city. Operated by the City of Palo Alto Utilities Department (CPAU), the Fiber Optic Utility licenses backbone connections to local businesses and telecommunications resellers requiring access to advanced broadband telecommunications service.

There is a highly competitive Palo Alto commercial fiber optic marketplace served by multiple telecommunication companies and Internet Service Providers (ISPs). Many of these entities control independently owned overhead and/or underground fiber optic systems. These systems are also accessed by third-party ISP-service resellers using leased capacity on the fiber optic networks.

Those CPAU fiber optic licensees wishing access to the internet outside of Palo Alto must have their CPAU fiber optic service connected to the data center (SV8) currently owned by Equinix LLC and located in Palo Alto. This neutral data center, designated as Equinix SV8, is independent of any one ISP or telecommunications carrier affiliation, and serves as an internet exchange point (IXP) providing the physical infrastructure through which over 70 ISPs and content delivery networks (CDNs) exchange internet traffic between their networks. Originally constructed by the Digital Equipment Corporation in 1996 as one of the first IXPs in the world, it was (and still locally) called the “Palo Alto Internet eXchange (PAIX).” The City has been leasing fiber optic access and termination services at PAIX since the inception of the fiber network.

For CPAU dark fiber optic licensees to access the telecommunications services provided by commercial fiber optic vendors or ISPs of their choice, the licensee, or their third-party provider, must install privately-owned electronic equipment to “light” their leased dark fiber optic cable for on-site data use, building-to-building (campus) communications, or to access internet service outside of Palo Alto.

The City Council provided direction to staff to proceed with Phase 1 of the fiber to the premises (FTTP) expansion project on December 19, 2022 ([Staff Report 14800](#)¹). In Phase 1, FTTP would be built out in selected areas of the city and expand gradually. On November 7, 2023, staff presented an update on plans related to advancing a FTTP pilot program and construction alignment with Electric Grid Modernization to the Council’s Finance Committee. Upgrading overhead lines in 90% of Palo Alto neighborhoods through electric grid modernization and piloting the build out of Palo Alto Fiber to the home supports a reliable, sustainable and connected community.

ANALYSIS

Equinix provides fiber leasing and telecom cages that support the City’s dark fiber optic licensing program and the Fiber-to-the-Premises (FTTP) project. Previously, the City had two separate contracts with Equinix for each program. The original lease agreement for dark fiber licensing was established in 1996 when the City built the dark fiber backbone. On November 27, 2023, Council approved a new license agreement with Equinix to secure a dedicated space for the infrastructure required to operate FTTP ([Staff Report 2310-2129](#)²). This Amendment extends the FTTP project contract by an additional 2 years, making it a total of 5 years, and consolidates the separate dark fiber lease program under a single contract with the same term.

¹ Staff Report 14800 <https://portal.laserfiche.com/Portal/DocView.aspx?id=59132&repo=r-704298fc>

² Staff Report 2310-2129 <https://portal.laserfiche.com/Portal/DocView.aspx?id=69113&repo=r-704298fc>

For the dark fiber licensing program, the City leases four “cabinets” (vertical racks sited next to each other, each capable of holding multiple termination/switching boxes in stacked configurations). The Equinix fiber licensing agreement includes contingency funds of \$75,000 for potential Service Orders that might be required for expanded CPAU fiber optic ductwork (“innerducts”) and cable configuration changes within PAIX during the term of the contract. This contract will also fund the lease cost for one additional cabinet which will increase CPAU’s fiber optic termination and switching capacity within PAIX by 20 percent. This additional capacity will provide sufficient PAIX resources for all projected CPAU customer growth scenarios within the term of the proposed contract.

For FTTP, a data center is required to provide internet services. Equinix is the best option to serve as the Data Center and is designated as one of two fiber huts or aggregation point which can serve up to 15,000 customers. A private cage will provide a secure space for the infrastructure required to operate the fiber and internet service provider (ISP) for FTTP. In addition, staff recommends contingency funding of \$109,900 for additional services such as additional power, cross connects to peer with other ISP’s and fiber cables. This capacity is recommended to ensure flexibility as the City begins Phase 1 of the FTTP build out and any unforeseen issues in this new line of service.

Benefits of a private cage with racks vs racks in an open or shared share:

- Scalability - Dedicated space to support the infrastructure for FTTP and new backbone.
- Privacy/Security – Only people that are approved by the City will be allowed access.
- Reliability – Reduced likelihood of damage to infrastructure by third parties.
- Efficiency – Full control of cross connects and cable management between racks.

This agreement is exempt from the City’s solicitation requirements under the “sole source” exception in PAMC Section 2.30.360 (d): Because of its geographical location, PAIX is the only economically and physically viable co-location internet facility or data center available to CPAU and its fiber optic licensees. The nearest alternative IXP data center site is in the City of Santa Clara. Connection to the Santa Clara site from Palo Alto would require miles of multiple underground conduits through several municipal jurisdictions. Such construction would be prohibitively expensive, be significantly less secure than the current Palo Alto location (greater risk due to construction and contractor dig-ins in other jurisdictions, requiring Palo Alto to contract with remotely-sited, third-party repair fiber repair companies), and limit fiber optic utility connectivity to customer sites back in Palo Alto.

FISCAL/RESOURCE IMPACT

Funding for revision number 1 of this agreement is included in the FY 2025 Adopted Fiber Optic Fund budget. Subsequent years are subject to the annual budget process and appropriation of funds. If the pilot is successful and the FTTP project continues, this will become an ongoing cost with funding in subsequent years subject to Council’s approval of each fiscal year’s budget appropriation.

STAKEHOLDER ENGAGEMENT

This has been coordinated with internal stakeholders including Information Technology and Utilities, and in consultation with Magellan/Entrust, the City's professional services partner in the development of the FTTP project. Through the Utilities Advisory Commission (UAC) and Council, the community has had the opportunity to hear updates on the status of the FTTP project and provide feedback on the project. The next update on the FTTP project is scheduled with the UAC on January 8, 2025 and is expected to discuss product offering, marketing strategy, and project timeline.

ENVIRONMENTAL REVIEW

Approval of this agreement does not meet the definition of a project under the California Environmental Quality Act (CEQA) regulations section 15378 because it is not an activity that will cause a direct physical change in the environment and is a continuing maintenance activity for the FTTP and dark fiber projects.

ATTACHMENTS

Attachment A: Amended Order with Equinix, LLC

APPROVED BY:

Dean Batchelor, Director of Utilities

Darren Numoto, Director of Information Technology;

Staff: Dave Yuan, Strategic Business Manager