

# Palo Alto Fiber Project and Construction Alignment with Electric Grid Modernization

November 7, 2023



# AGENDA

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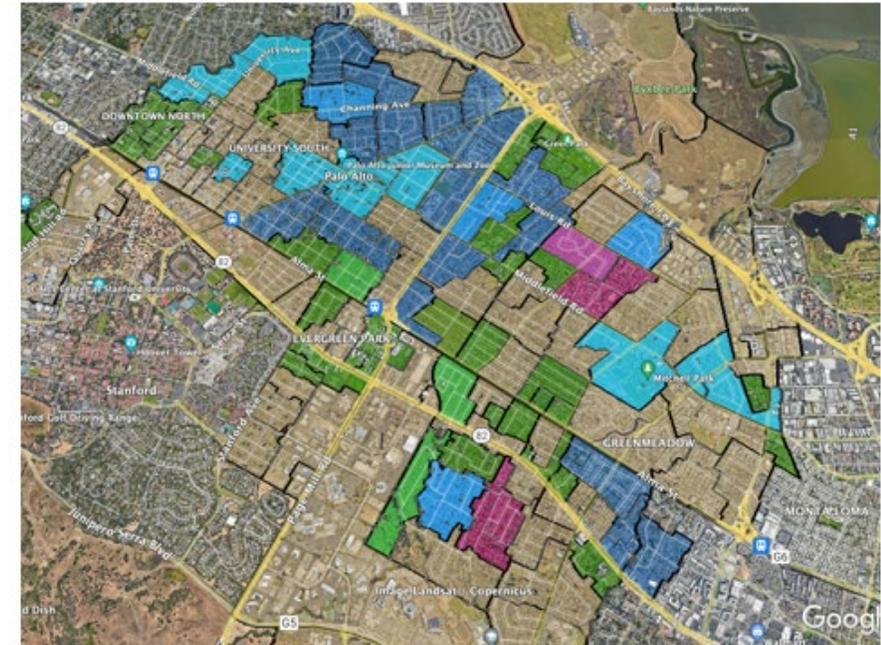


- Project(s) Recap
  - Fiber Expansion Plan
    - Fiber Backbone Expansion “Rebuild” Project
    - Fiber-to-the-Premises (FTTP) Project
  - Electrification
    - Grid Modernization for Electrification Project
- Informational Updates
  - Alignment of Fiber Expansion Plan and Grid Modernization
  - California Environmental Quality Act (CEQA) Initial Study
  - Joint Pole Ownership Coordination with AT&T
  - Contract Amendments
  - Other Updates

# HOW DID WE GET HERE?



- **What has Council Approved?**
  - **Dec 19, 2022 Council Approved to**
    - Proceed with dark fiber backbone expansion “rebuild”
    - Build FTTP Phase 01 in multi-phased approach without debt financing



AT&T Fiber service	Lowest cost, AT&T Fiber
Lowest cost, Highest density	Highest number of deposits

- **Jun 19, 2023 Council Approved**
  - New Grid Modernization for Electrification project in FY24 Budget
  - New Fiber-to-the-Premises project in FY24 Budget

# RECAP OF PROJECTS

FIBER BACKBONE REBUILD	FIBER-TO-THE-PREMISES	GRID MODERNIZATION
Estimated cost \$25.6M (FO-16000)	Estimated cost for Phase 1 \$20M; Citywide \$102M (FO-24000)	Estimated cost \$220M to \$306M (EL-24000)
Funded by Electric and Fiber funds	Funded by Fiber Fund	Funded by the Electric Fund; debt financing and/or grants
Supports the City’s fiber licensing service and internal needs: <ul style="list-style-type: none"> <li>▪ Improve fiber and electric system reliability, security and capacity</li> <li>▪ Enable more connectivity for City departments</li> <li>▪ Internal communication needs for SCADA, AMI, DA and other critical infrastructure</li> </ul>	Supports the City’s high speed broadband internet needs: <ul style="list-style-type: none"> <li>▪ Provides City-owned high-speed internet service</li> <li>▪ Provides new capacity for dark fiber licensing</li> <li>▪ Community investment in its own broadband network</li> </ul>	Supports City’s S/CAP goals and future demand <ul style="list-style-type: none"> <li>▪ 100% residential electrification</li> <li>▪ Upgrade existing substations, replace transformers, convert existing 4 kVa lines to 12 kVa to increase capacity and meet future demand.</li> </ul>

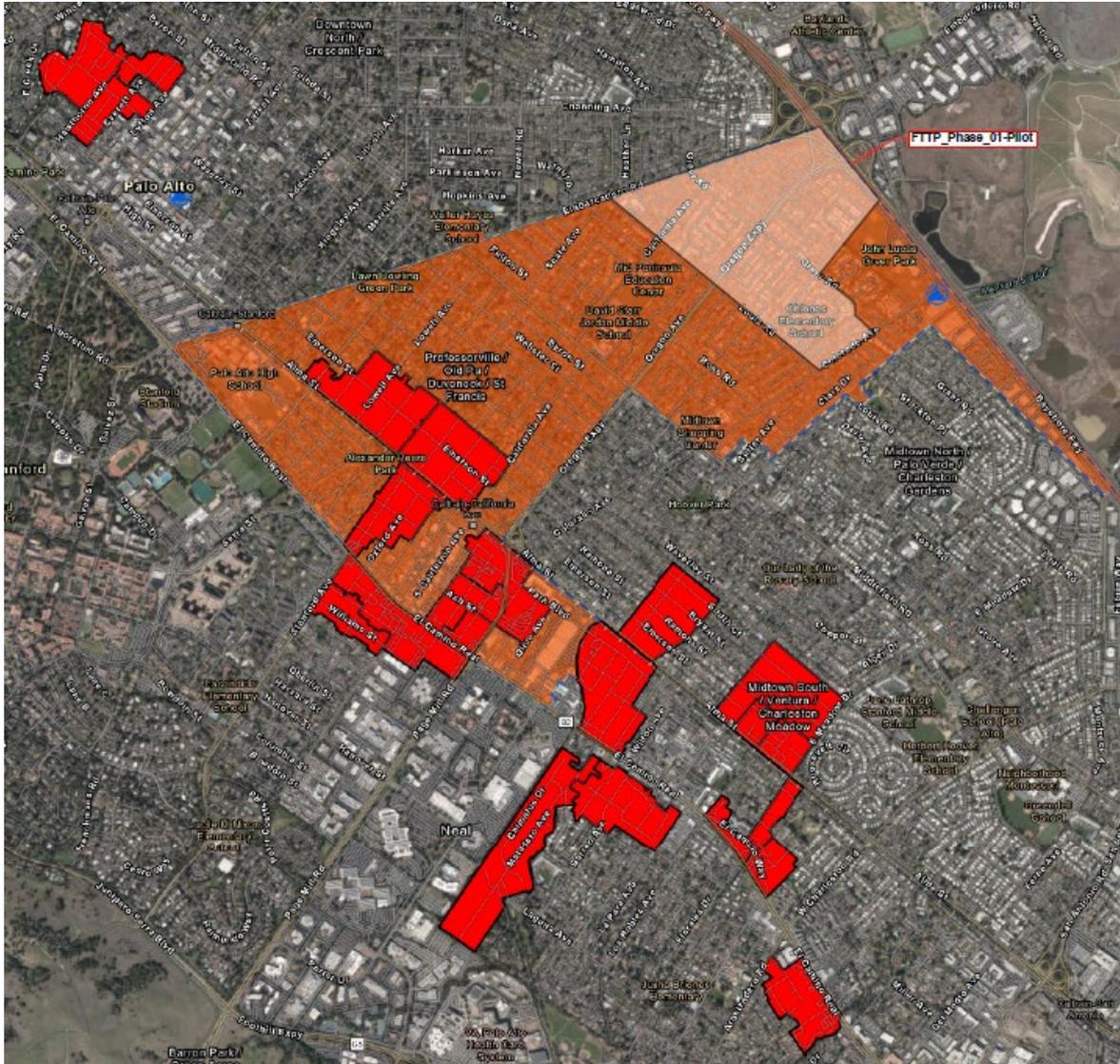
# INFORMATIONAL UPDATES

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## Topics to address prior to construction

- ✓ **Pilot aligning fiber and grid modernization project to inform on**
  - Pole make-ready and replacement
  - Material lead time and warehousing
  - Internal resources to implement and coordinate projects
  
- ✓ **Initial Study for CEQA in progress to evaluate potential impacts**
  - Identify physical, biological, social and economic factors
  - Provide mitigation efforts
  
- ✓ **Joint Pole Ownership Coordination with AT&T in progress**
  - Approximately 5,550 poles shared with AT&T
  - Upcoming replacements and coordination will overwhelm staff
  - Eliminated Northern California Joint Pole Association membership option
  
- ✓ **Contract Amendments**
  - VIP Powerline – power and fiber construction
  - MP Nexlevel– substructure and fiber construction
  - Magellan/Entrust– power and fiber engineering design

# Pilot Map Overlay with Phase 1 & Areas of Interest



-  Pilot Area Map to align Grid Modernization with FTTP (1,224 customers and 409 poles)
-  Proposed Phase 1 FTTP Map (Additional 5,560 customers and 1,241 poles)
-  Areas of Interest Map based on Lower Construction Cost, Higher Density, Less Competition, Higher Customer Interest

# Pilot Project Plan (draft outline subject to change)

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## ✓ **Pre-construction**

- Aerial Power Make Ready Engineering - Feb 2024
- Materials Ordering/Warehousing - Feb 2024
- CEQA Approval - Apr 2024
- Fiber Hut at Colorado Power Station - Oct 2024

## ✓ **Construction**

- Power: Mar 2024 - Oct 2024
- Fiber: Jun 2024 - Feb 2025

## ✓ **Operations & Customer Outreach**

- Operations Support Systems “OSS”
- Business Support Systems “BSS”
- Marketing/Event(s)
- Community Meeting(s)

# Q&A