

US Department of Energy - Office of Indian Energy Program Review

- November 21, 2024

Pala Community Microgrids Project



PALA BAND OF
MISSION INDIANS

Darold Wallick
Environmental Specialist
Pala Band of Mission Indians



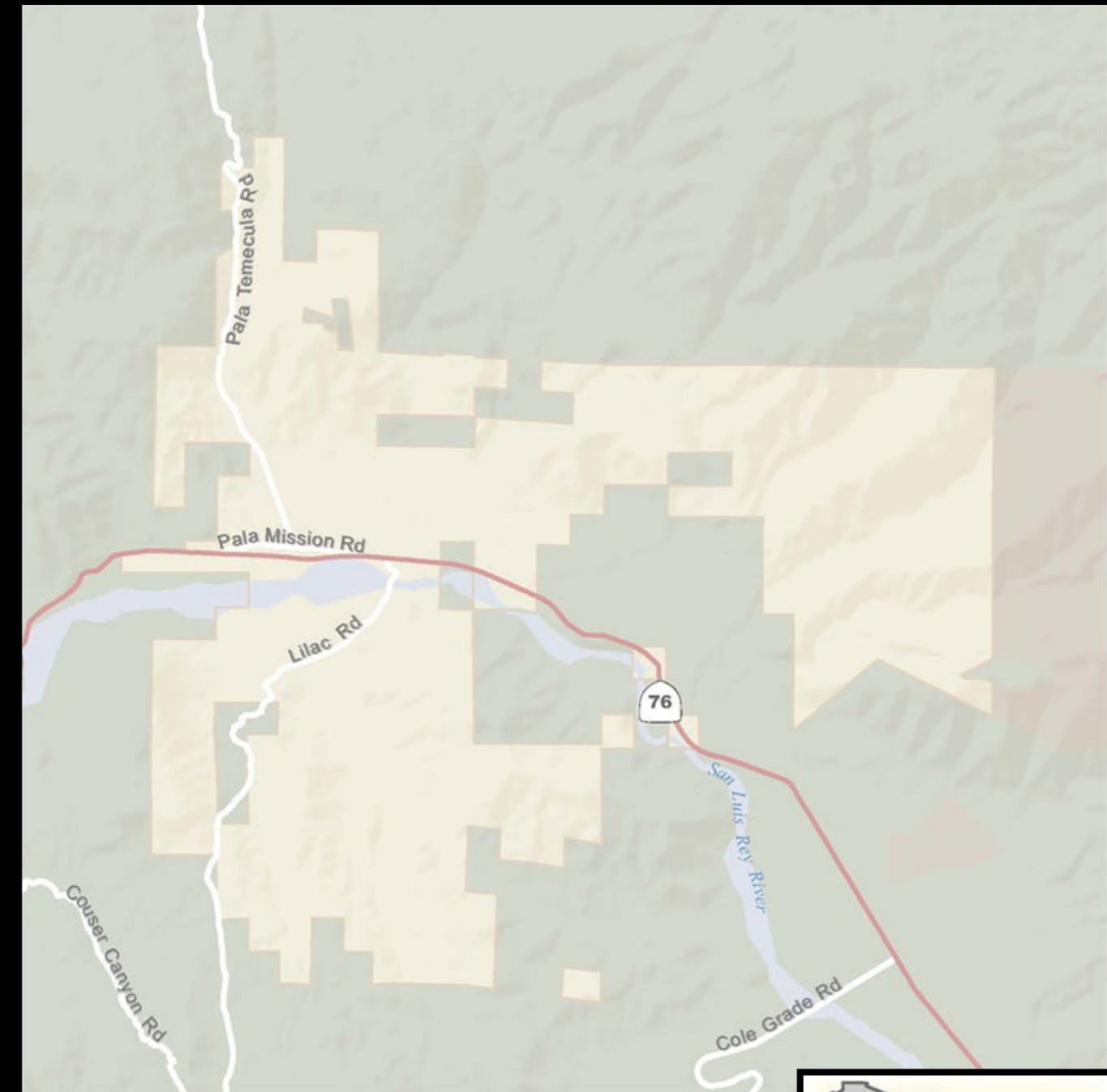
Pala Community Microgrids Project

Pala Band of Mission Indians

San Diego County, California

~16,000 acres

~1,500 residents



Pala Reservation Boundary
Pala Band of Mission Indians

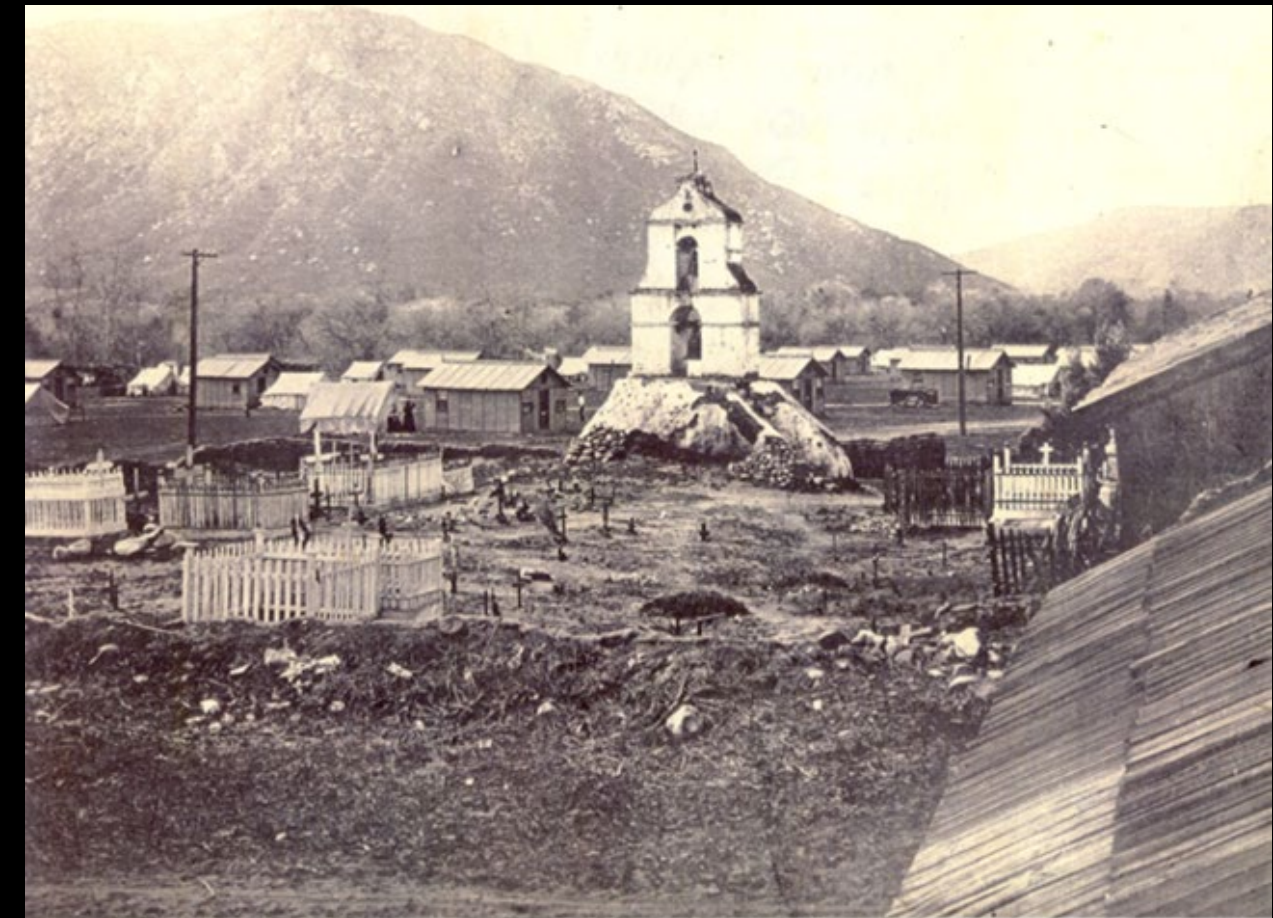
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This map was created as a geographic representation of data. Neither the Pala Band of Mission Indians, nor the Pala GIS Office makes any guarantee or accepts any liability for its accuracy.

Pala Community Microgrids Project

Pala Reservation History



Pala Community Microgrids Project

Pala Reservation Today



Pala Community Microgrids Project

Past Activities

Pala Fire Department Solar Project

Pala Energy Options Analysis

Solar Feasibility Report



Fig. 4-A: Summary of Recommendations for Six Assessed Options

#	Option	Recommendations
1	Tribal Facility Solar Electricity	<ul style="list-style-type: none"> Pursue development of the Tribal Administration Solar Complex project, ensuring systems are designed and developed to enable integration into resilient energy microgrid system. Design systems for location behind the energy meters of served loads, with interconnection systems capable of supporting safe islanding functionality for microgrid operations. <i>NOTE:</i> Option 1 is somewhat duplicative of Option 2. The assessment team recommends prioritizing Option 2 because it produces more benefits for the Tribe.
2	Tribal Facility Solar+Storage System	<ul style="list-style-type: none"> Pursue development of the Tribal Facility Solar+ Storage System project. Ensure design locates systems behind the energy meters of served loads, with interconnection systems capable of supporting safe islanding functionality.
3	Utility-Scale Solar	<ul style="list-style-type: none"> Defer further action on the Canyon Solar Field proposal unless and until such time as the landowner brings a more concrete proposal with verifiable resolutions to all key issues affecting the project's practical viability.
4	Optimized SDG&E Rate Plans	<ul style="list-style-type: none"> Request rate plan adjustment from SDG&E – at least for the 15 meters that analysis shows would save 3% or more with a new rate plan. Apply new rate plan assumptions to future project assessments to ensure cost-benefit analyses use updated estimates of utility costs.
5	Direct Access Electricity Supply	<ul style="list-style-type: none"> Re-consider in 2021 submitting an application to enter into the lottery for the next Direct Access enrollment period. Update the assessment of potential savings through Direct Energy based on estimated costs under proposed new rate schedules assessed for Option 4. Seek clarification on how committing to Direct Access electricity supplies might affect the Tribe's future options, especially for developing onsite resources to serve facility loads.
6	Tribal Utility or Utility Authority Formation	<ul style="list-style-type: none"> Initiate Tribal Utility Strategy process to establish objectives, costs, and development strategy for prospective formation of tribal utility or utility authority. If Tribe decides to proceed with Tribal Utility Strategy, request BIA funding for the project through the Tribal Energy Development Capacity program. Defer entering any service-line agreement with SDG&E pending outcome of Tribal Utility Strategy process. Timing of the process TBD by PED.

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Past Activities

35 level 2 EV charging stations
installed at the Pala Casino Resort



Pala Community Microgrids Project

Participants

- Pala Band of Mission Indians
 - Pala Environmental Department
- Prosper Sustainably
- Microgrid Institute
- Our Energy
- Swell Energy
- Elite Electric
- San Diego Gas & Electric

Project Sites

- Pala Administration Complex
 - Pala Fitness Center
 - Rez Radio
- Pala Tribal Law Enforcement
- Pala Utilities
- Tribal Fleet
- Pala Fire Department
- Pala Youth Center
- Wastewater Treatment Plant

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Pala Community Microgrids Project

Original Project Objectives

- Eight of our facilities to have solar and bess
- Displacement of 102% of Pala's electricity consumption at the eight facilities
- Increase utilization of Tribally owned renewable energy resources
- Displace imported fossil fuels

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Location 1:
 a. Pala Tribal Administration
 b. Pala Fitness Center
 c. Pala Tribal Radio Station



Location 2:
 Wastewater Treatment Plant



Location 3:
 a. Pala Utilities
 b. Pala Tribal Services

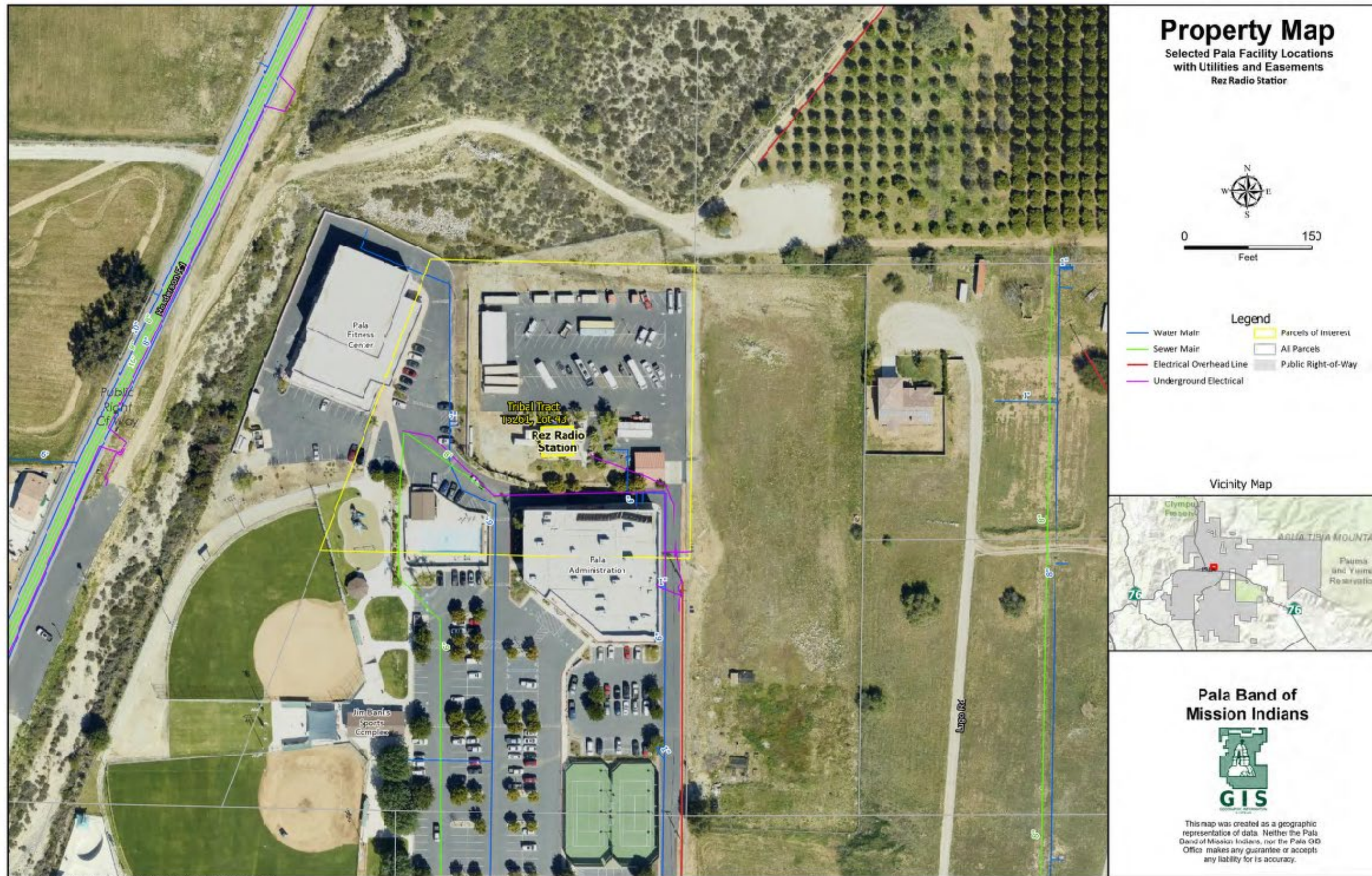


Location 4:
 a. Pala Law Enforcement
 b. Pala Youth Center

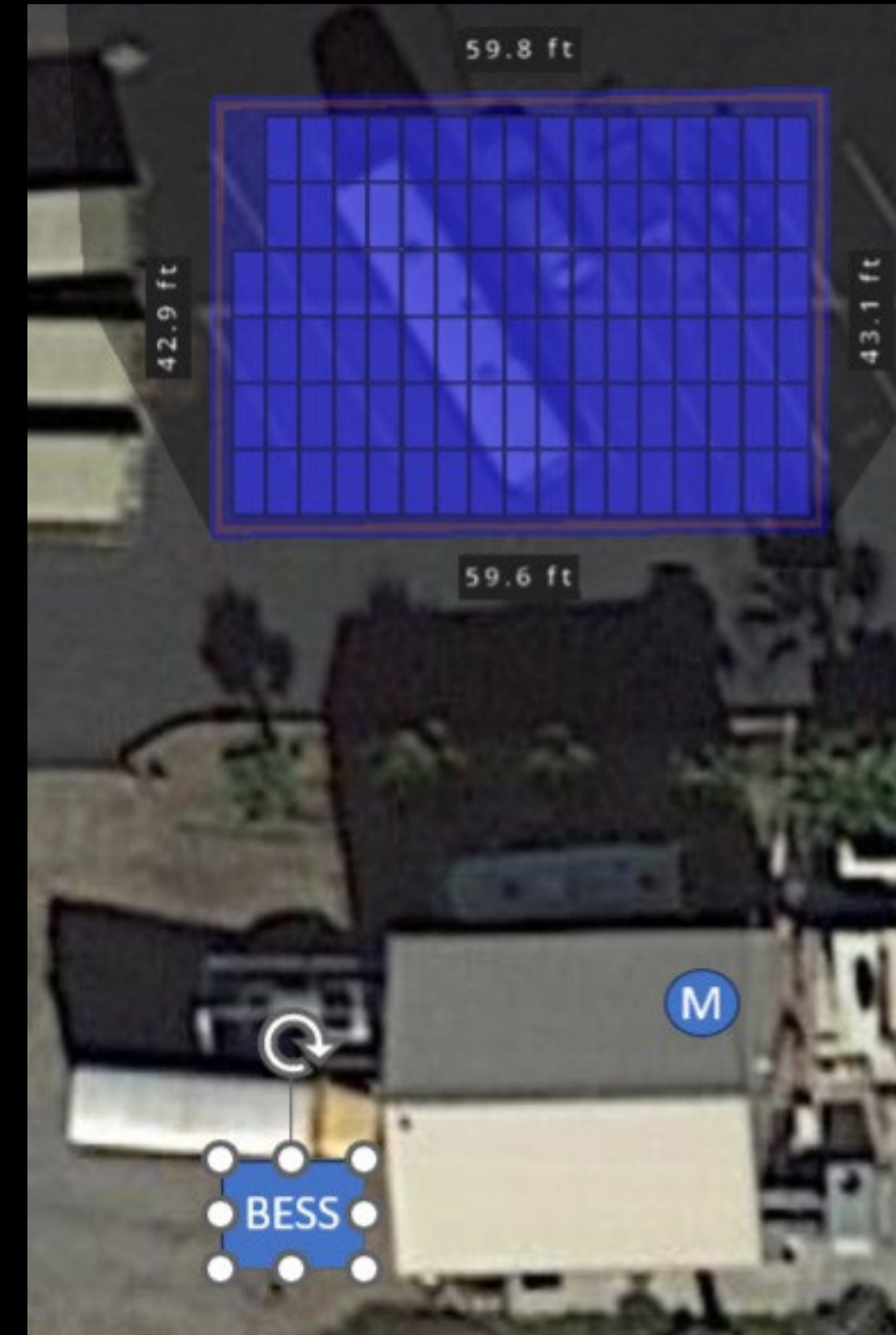
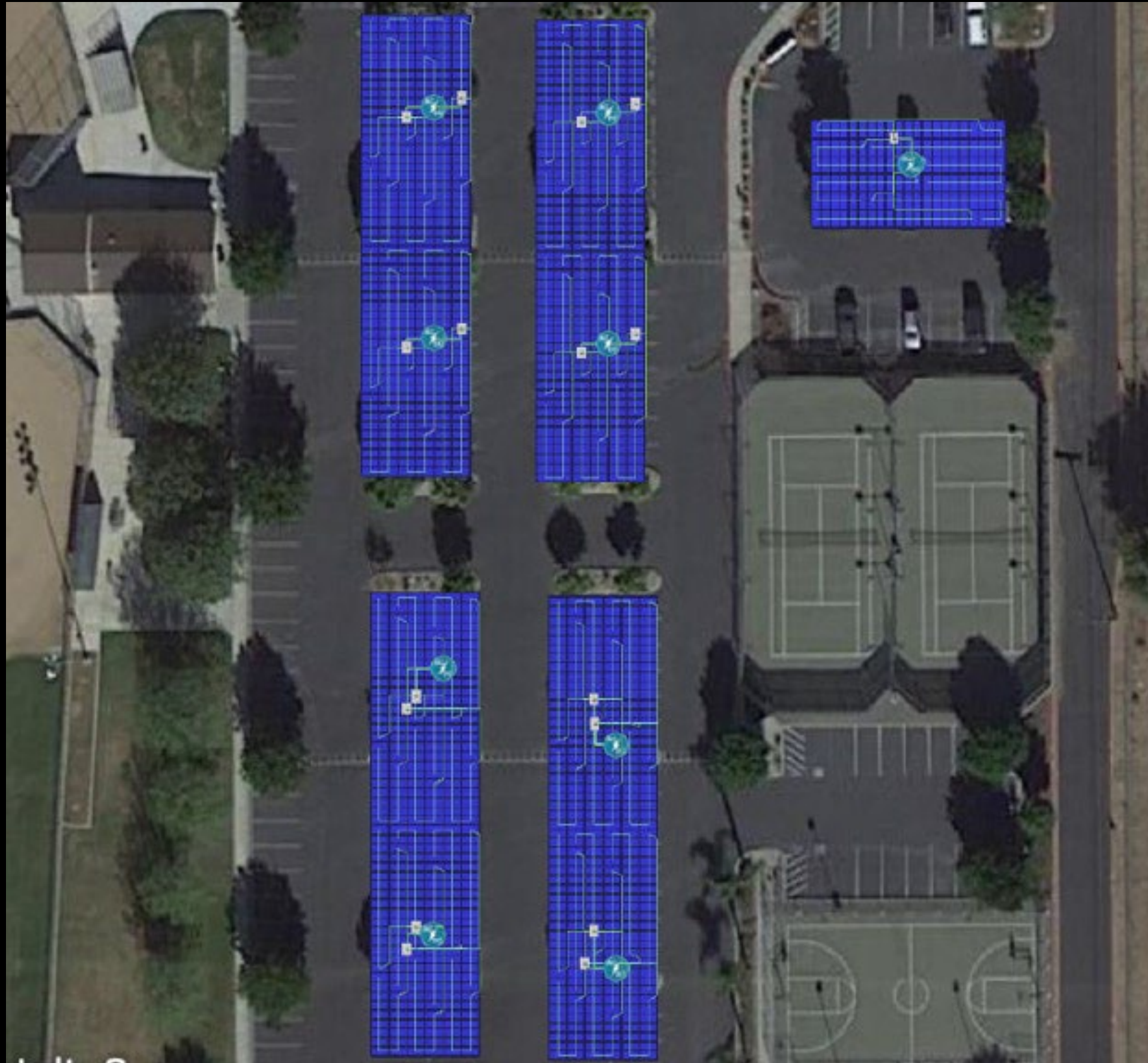
Legend

- Solar PV Location
- BESS Location

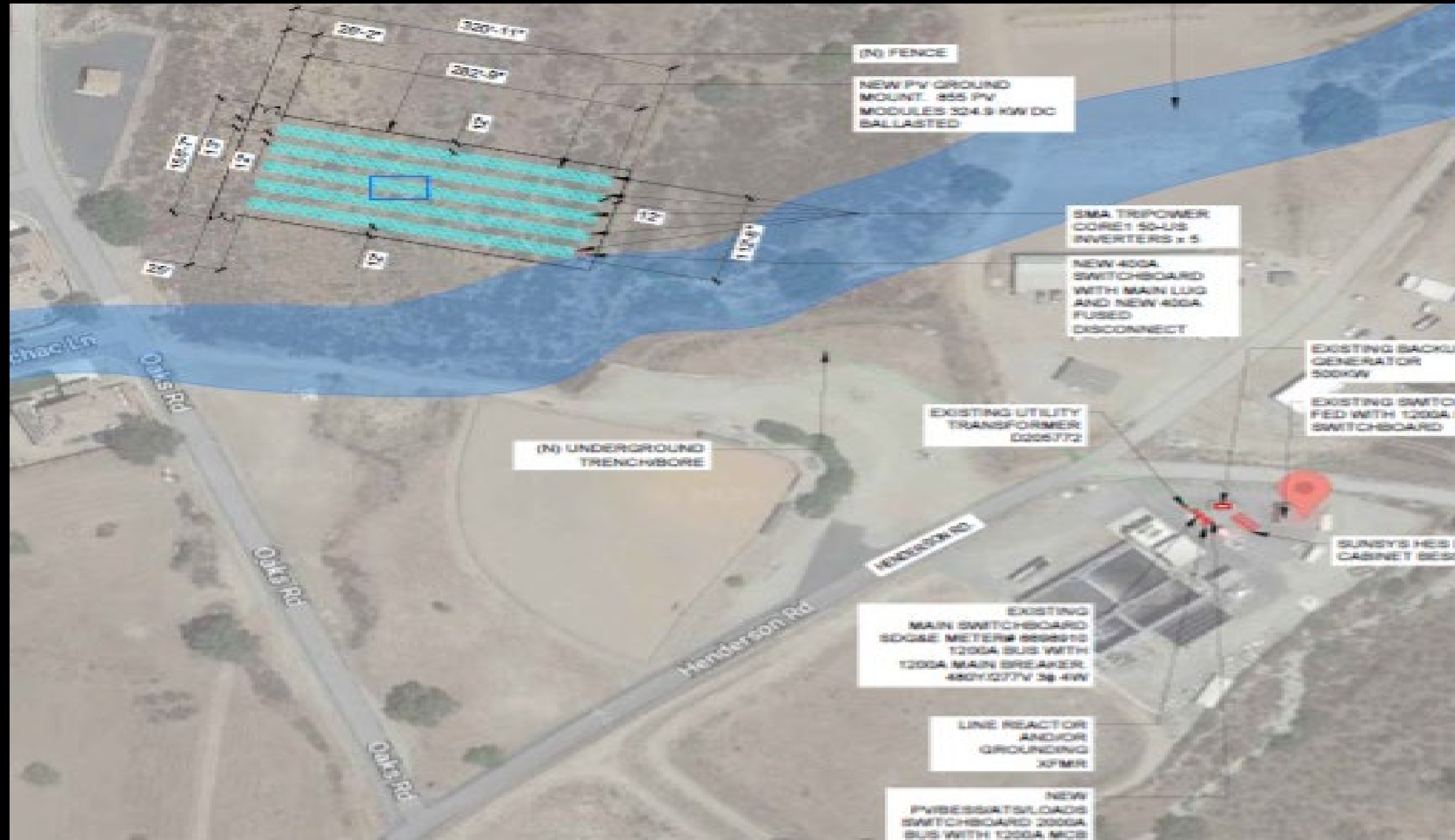
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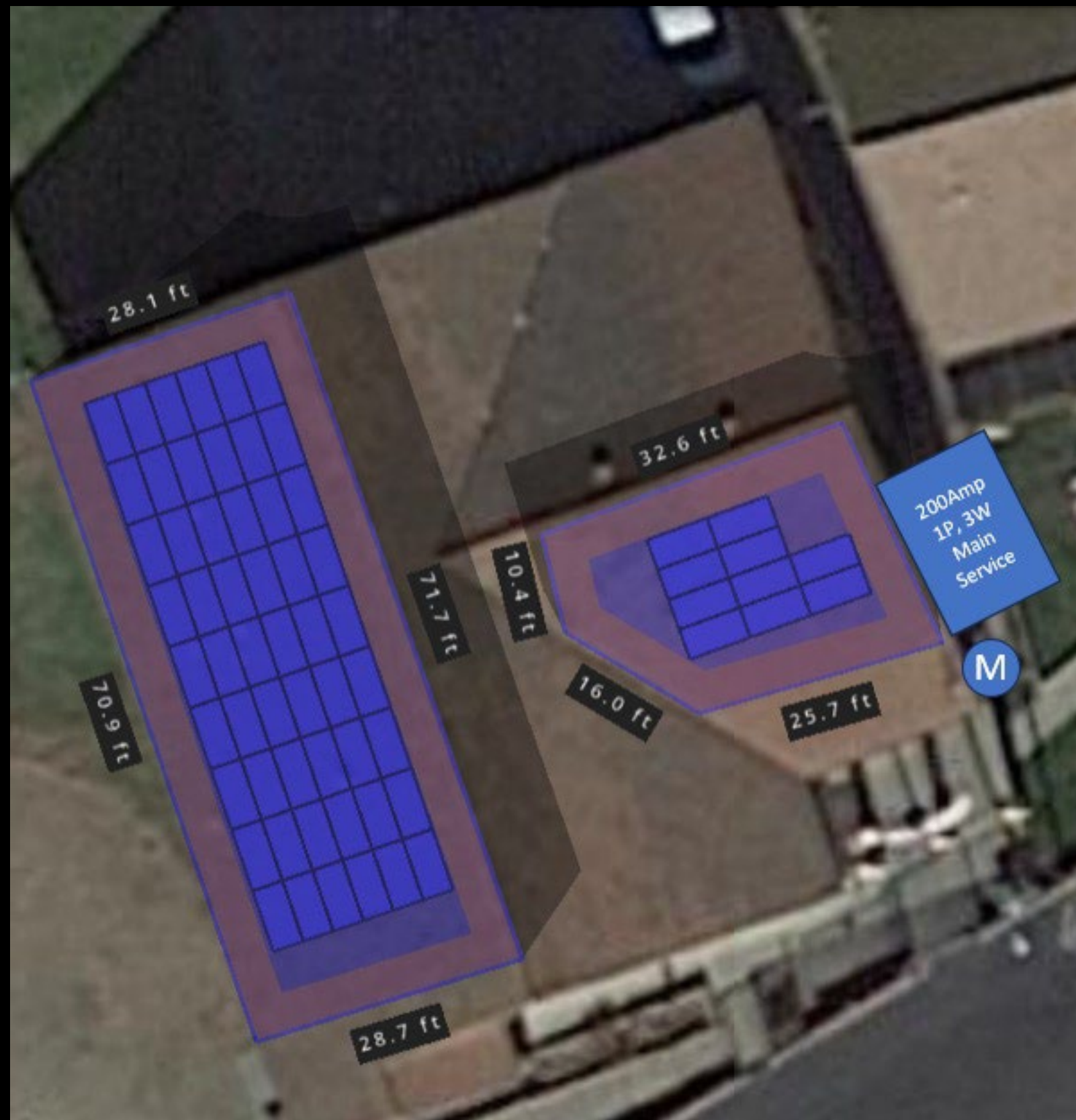
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Administration Facility

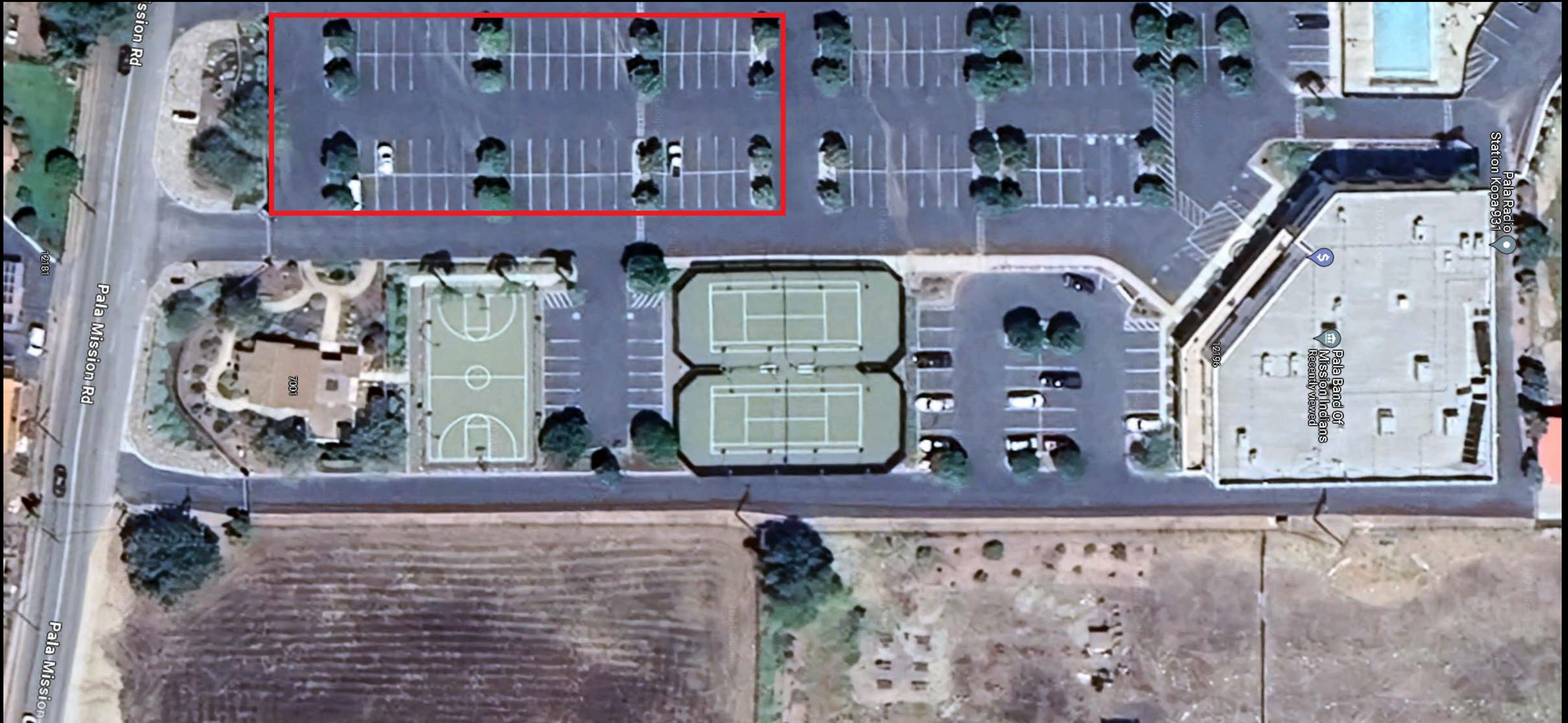
NCD

NORTH COUNTY DRILLING



Pala Community Microgrids Project

Construction Week 1



Pala Community Microgrids Project

Construction Week 1



Pala Community Microgrids Project

Construction Week 2



Pala Community Microgrids Project

Construction Week 3



Pala Community Microgrids Project

Construction Week 4



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Construction Week 5



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Construction Week 6



Pala Community Microgrids Project

Construction Week 7



Pala Community Microgrids Project

Construction Week 8



Pala Community Microgrids Project

Construction Week 9



Pala Community Microgrids Project

Construction Week 10



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Administration Facility



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Administration Facility



Pala Community Microgrids Project

Administration Facility



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Tesla cooling tubes



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Administration Facility



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Challenges:



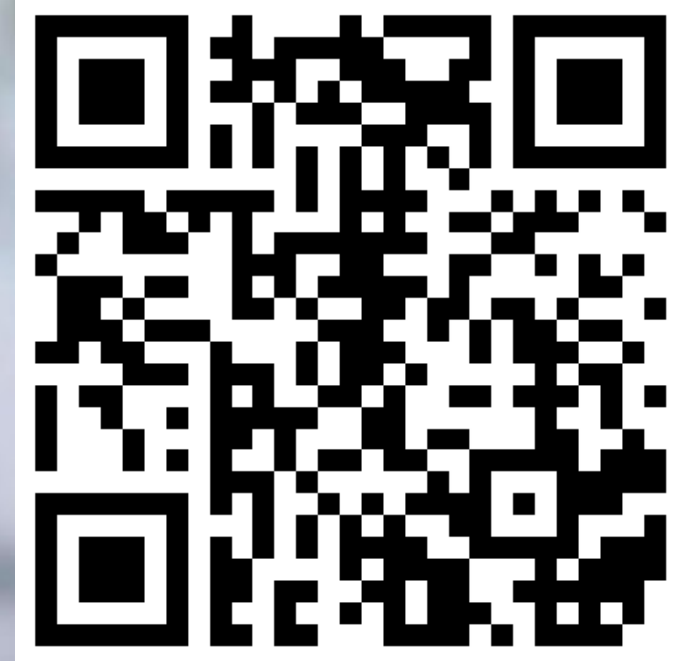
Thank you! Questions? Comments?



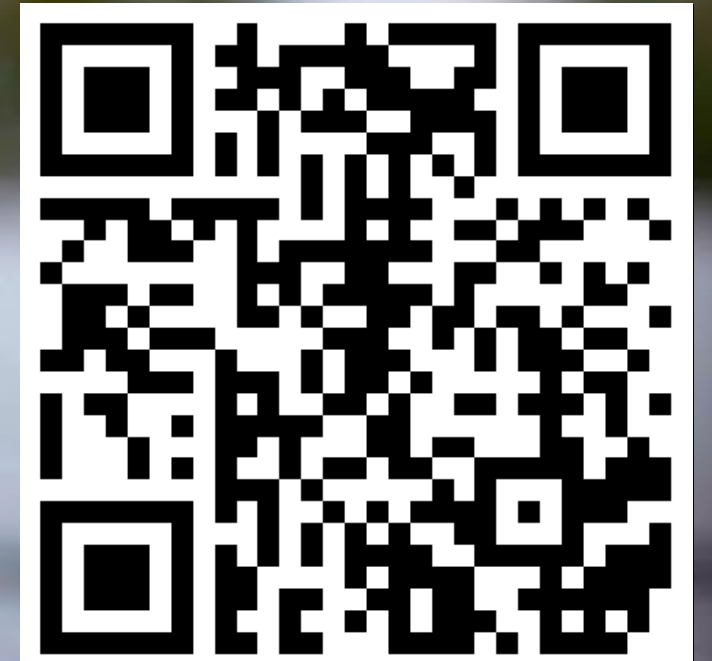
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