



# Sine Building Covered Parking

01/23/24 City Council Workshop





# Site Opportunity



- 17 spaces immediately to the south of the Sine Building
- 51 spaces to the east (Thunderbird Lounge) Held for Future Development



# Project Considerations

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- Safety lighting
- Durability and maintenance of structure
- Developing a scalable design for future city projects
- Renewable energy
  - Opportunity for use of Solar Canopies
  - EV charging station(s)
  - Available Electrical capacity
  - ROI - Payback/Rebates associated with renewable energy use



# Shade Options

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- Two provide the best durability, useful life, ease of maintenance and a solar option. The two options are:
  - Solar panel shade structure with cantilever frame (I-Beam Frame)
  - Non-solar shade structure with cantilever frame (I-Beam Frame)

# Shade Options



Solar Shade Structure with  
Cantilever Beam



Non-Solar Shade Structure  
with Cantilever Beam



# Cost Estimate – 17 Spaces at Sine

Sine building annual energy usage	~\$21,000
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## Non-solar

- Initial Cost ~ \$166,000
- Service cost 0
- 10-Year Cost 0

## Solar

- Initial Cost ~\$418,000
- Cleaning cost : ~\$1,500 per year x10 Years = ~\$ 15,000
- 10-Year potential energy savings ~\$165,000\*
- ROI ~15.3 years

\* Savings estimate are subject to variables out of City's control:

- Power rate increase of 3% per year
- Equipment's optimal performance without failure
- APS credit rates are maintained throughout period

# Options

- 1) A non-solar structure
  - Lower initial investment
  - Smaller scale project
- 2) Solar structure
  - Larger initial investment
  - Longer time to build
  - Potential payback ~15.3 yrs.





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# Consensus