



Engineering, Operations, & Technology Committee

Iron Mountain Station Light & Power Electrical Improvements

Item 7-4

March 11, 2024

Item 7-4 Iron Mountain Station Light & Power Electrical Improvements

Subject

Authorize an increase of \$2,700,000 to an agreement with Tetra Tech Inc. for a new not-to-exceed total amount of \$3,350,000 for final design services for improvements to the Station Light and Power Electrical System at Iron Mountain Pumping Plant

Purpose

Upgrade the power distribution system to improve electrical reliability and flexibility and enhance operational safety to maintain reliable CRA water deliveries

Recommendation and Fiscal Impact

Authorize an increase to an existing agreement for final design of improvements to Station Light and Power Electrical System at Iron Mountain Pumping Plant

Fiscal impact of \$4.2 M

Budgeted

Location Map



Iron Mountain Station Light & Power Electrical Improvements



Station Light & Power
Switchrack

Background

- Iron Mtn. electrical systems built in 1939
- Station Light & Power electrical system
 - Provides power for critical equipment & village housing
 - Equipment lacks modern safety features
 - Obsolete distribution system
 - Distribution panels at full capacity
 - Spare parts not available
- Preliminary design for electrical system improvements is complete

Background

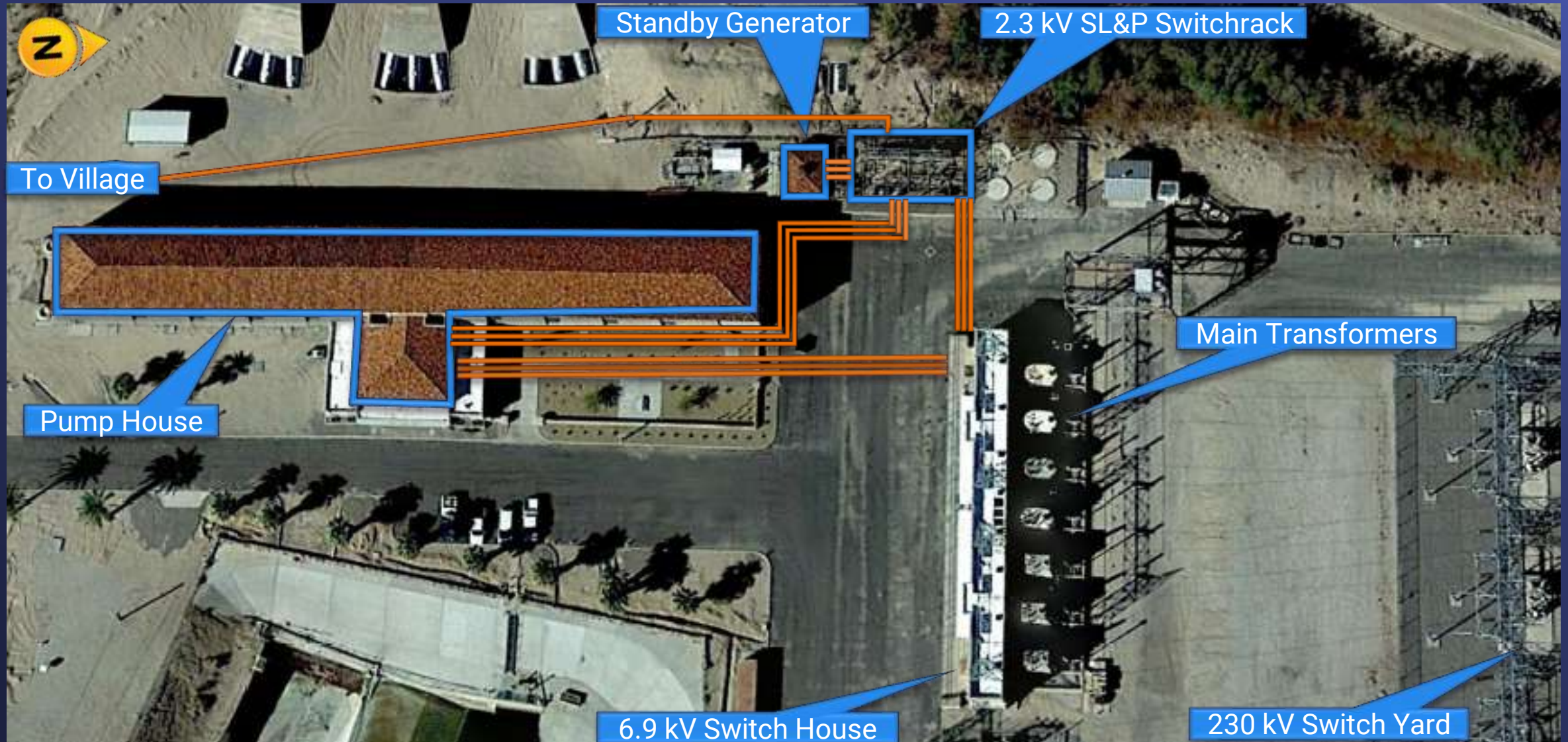


Existing 2.3 kV SL&P Switchrack



Proposed Indoor 4.16 kV Switchgear

Iron Mtn. Pumping Plant



Planned Work

- New 4.16 kV Generator & Electrical Buildings (cast-in-place)
 - Double-ended 4.16 kV & 480 V Switchgears
 - Battery Distribution System
 - Protection Relay Room
 - New Generator
 - Climate controlled environment
- New 4.16 kV & 480 V Transformers
- Upgrade Auxiliary Distribution System
 - New distribution panels, circuit breakers, cables, & conduits
- New duct banks



Proposed Generator & Electrical Buildings

Iron Mountain
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Alternative Considered

- Assess Metropolitan staff availability
 - Staff workload exceeds available resources
 - Specialized technical expertise required
- Selected Alternative
 - Professional services agreement for the subject project
 - Consultant & staff work as a hybrid team

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Tetra Tech Inc. Agreement

- Prequalified under RFQ 1305
 - Completed preliminary design
- Scope of Work:
 - Develop final design drawings & specifications
 - Prepare cost estimate
 - Participate in constructability review
 - Technical assistance during bidding
- Amendment amount: \$2,700,000
- NTE amount: \$3,350,000
- SBE participation level: 15%

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Metropolitan - Scope of Work

- Prepare instrumentation & controls design drawings
- Conduct constructability review & support activities
- Provide technical input & review consultant design work
- Perform shutdown planning, environmental support & project management

Allocation of Funds

Iron Mountain Station Light & Power Electrical Improvements

Metropolitan Labor

Final Design \$ 830,000

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support) 390,000

Professional/Technical Services

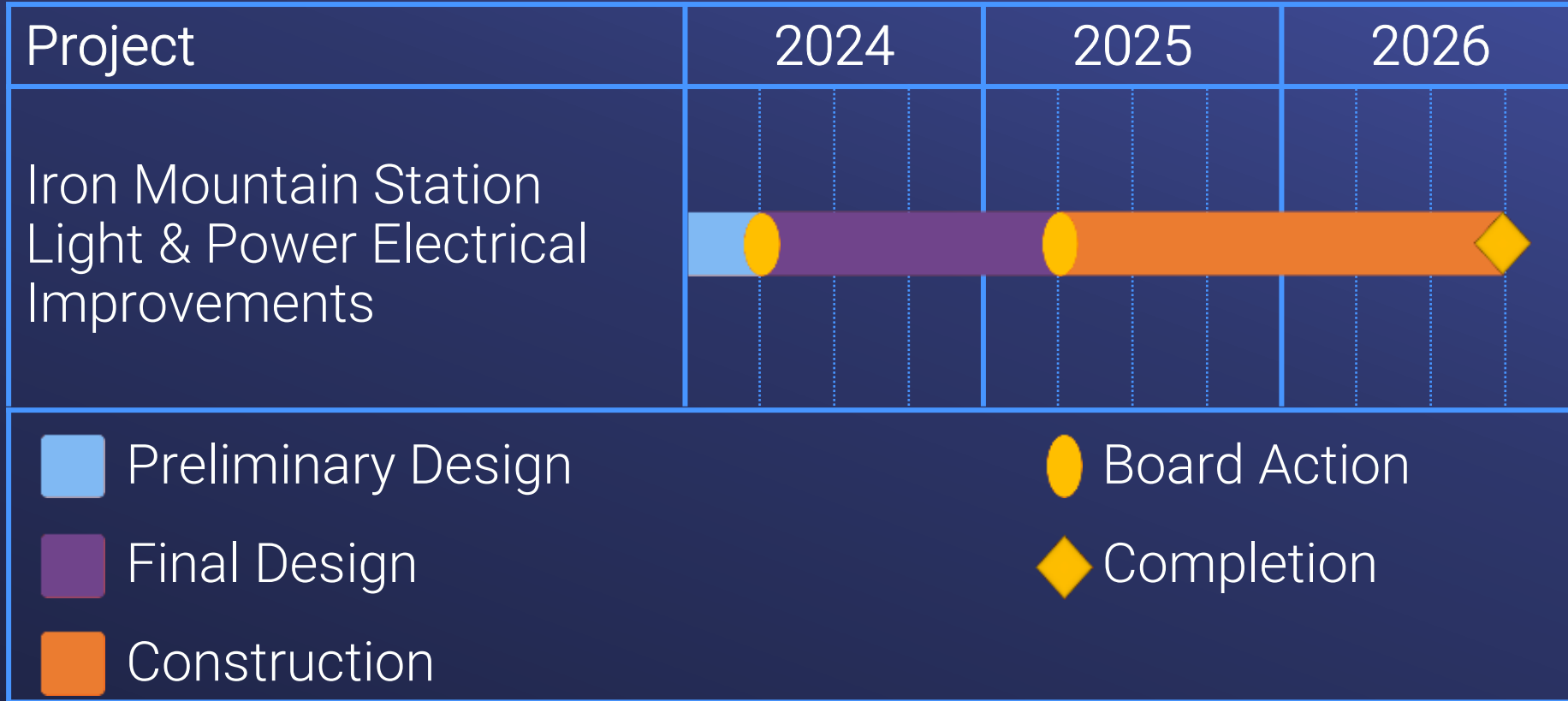
Tetra Tech Inc. 2,700,000

Constructability Review Consultant 80,000

Remaining Budget 200,000

Total \$ 4,200,000

Project Schedule



Board Options

- Option #1

Authorize an increase to an existing agreement with Tetra Tech Inc. for a new not-to-exceed amount of \$3,350,000 for design services for the Iron Mountain SL&P Electrical Improvements project.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1

