

JOHN DAY NORTH FISH LADDER ELEVATOR PHASE 1A

FFDRWG PHASE 1A - CRITERIA & CONSTRAINTS

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Objective: To perform a complete modernization of the John Day Dam's North Fish Ladder Elevator (#4) to improve reliability, safety, and compliance with current standards.

Problem Statement:

- The elevator, originally installed in the 1960s, is beyond its service life.
- It suffers from constant non-operability and unreliability, posing a risk to personnel and causing operational delays.
- Its current condition forces personnel to use alternate means like stairs, reducing efficiency and carrying capacity.

Recommended Scope of Work:

- Pursue a complete replacement, modernization, and improve reliability of the elevator.
- Ensure the elevator meets all relevant safety codes and standards for continued operation.



CRITERIA AND CONSTRAINTS

Constraints (Mandatory Limits)

- *Structural Modifications:* No significant structural modifications to the dam are permitted. The project must be completed within the elevator's existing footprint (shaft and machine room).
- *Power Availability:* There is limited available power and space for new equipment. The project must utilize the same sized circuit that powers the current elevator.
- *Codes:* All work must comply with the latest versions of applicable codes and standards (e.g., UFC, ASME, NFPA), which presents a challenge due to the structural limitations.

Criteria (Used for Selecting the Best Alternative)

- *Schedule:* Installation between December and March is preferred to minimize disruption to dam operations and fish passage activities.
- *Constructability:* The chosen alternative should cause the least possible disturbance to the functions of the north fish ladder, navigation lock, and spillway dam.
- *Life Cycle Cost:* Preference is given to alternatives with a lower initial installation cost and ongoing maintenance costs.
- *Durability, Reliability, & Maintainability:* Preference is for alternatives that offer the greatest increase in durability and reliability and are easier to maintain.
- *Operability & Functionality:* The project should select alternatives that make the elevator more useful and convenient, such as doors that are easier to open, increased car speed, brighter lighting, and new climate control systems.

 **QUESTIONS/COMMENTS?**

