

# Powered Switch Machine Replacement

## Project Scope

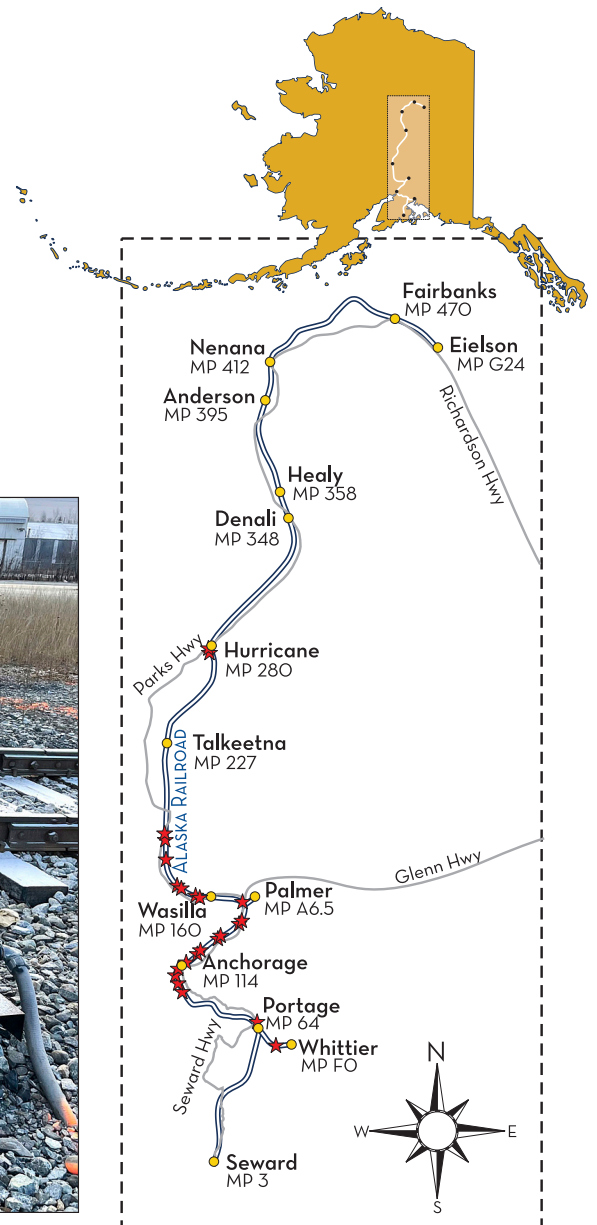
The Alaska Railroad Corporation (ARRC) is replacing control point (CP) powered switch machines at 42 locations along a segment of signalized central traffic controlled (CTC) track from Portage (Alaska Railroad Milepost 64) and the Whittier Branch to Hurricane (ARRC Milepost 280). The heaviest concentration of work will occur between Anchorage and Wasilla.

Railroad control points are locations where switches and signals control the flow and direction of train traffic. A switch is a rail mechanism that guides a train from one track to another at a railway juncture, such as a siding or spur. Powered switch machines are controlled remotely, so that the switch does not need to be manually thrown.



*Aging powered switch machines like this one will be replaced.*

## Project Locator Map



Nearly half of the project locations will also include an upgrade to the switch point adjuster. Attached to the powered switch machine, the adjuster acts as the “arm” that moves the rail into the correct position. The upgrade replaces rigid adjusters with spring basket adjusters.

The newer switch machines use the same connection types to minimize the need to upgrade other components.

Project work will occur entirely within the railroad’s right-of-way.

## Purpose and Need

Like all railroad equipment, powered switch machines have a useful life, after which worn or broken components may cause faulty performance or a failure to function. Existing machines have reached the end of life, and are no longer supported. This means when repairs are necessary, locating spare parts is difficult, and may soon become impossible.

Powered switch machines are critical to moving trains efficiently through CTC areas. Proactively replacing end-of-life equipment will help avoid otherwise inevitable and serious delays to railroad operations.

## Benefits

The project will:

- reduce the risk of serious and systemwide train delays due to equipment failure.
- save after-hours and overtime call-outs for track repair and maintenance crews.



- facilitate timely repairs by eliminating equipment that is no longer supported by the manufacturer.
- avoid financial impacts, including reduced revenue and unexpected labor and hardware expenses.

## Status

- Project planning began in 2021.
- Environmental analysis and documentation required by the National Environmental Policy Act (NEPA) is a categorical exclusion. The CE was drafted during the fourth quarter of 2021 for review by the Federal Transit Administration (FTA).
- Equipment and materials procurement completed by the second quarter 2022.
- Construction began in fall 2022, with work performed by Alaska Railroad internal workforces.
- Project completion is expected by second quarter 2023.

## Cost and Funding

The project budget is \$943,688. It is funded entirely by the FTA grant money from the Coronavirus Aid, Relief, and Economic Security Act (CARES Act). CARES Act funding does not require a matching contribution.

## For More Information

Email the ARRC at [Public\\_Comment@akrr.com](mailto:Public_Comment@akrr.com).



## Component Upgrade

*Rigid switch point adjusters, like the one pictured at left, are being replaced with newer spring basket switch point adjusters like the one pictured at right.*