

Glenn Highway Rail Crossing Improvements

Background

The Alaska Railroad Corporation (ARRC) has been hauling gravel for businesses that mine gravel material in the Palmer area since the 1970s. The Alaska Railroad's Palmer Branch track parallels the Glenn Highway, from the Parks/Glenn highways interchange near Matanuska to downtown Palmer. Over time, residential neighborhoods have developed along this stretch of the Glenn Highway and around the mining activity. Residential development includes several side streets that connect neighborhoods to the highway. As a result, long gravel trains block closely-spaced side streets during the gravel-loading process at gravel pit tipples.

Inner and Outer Springer Loop roads experienced a reprieve from daily summer gravel train activity starting in 2009, when Alaska Sand & Gravel (AS&G) temporarily relocated to develop a small Birchwood gravel mine. The Birchwood pit was depleted in June 2013, when AS&G returned to its Palmer pit on the east side of the Glenn

Highway just south of the highway intersection with Outer Springer Loop. The Palmer site is expected to produce gravel for another 15-20 years.

For a few years after resuming Palmer operations in 2014, the railroad tried breaking the train into two sections to avoid blocking Inner Springer Loop for more than a few minutes. As the first half of the hopper cars were loaded with gravel, the train moved slowly south, blocking Outer Springer Loop for about an hour. The process repeated for the second half of the train. ARRC determined this operation was too inefficient with too little benefit. It added significant time to the overall process, and only reduced Inner Springer Loop road blockage by 10-15 minutes.

Current Gravel Loading Process

The nearly mile-long gravel train arrives in Palmer, pulling 75 to 86 empty hopper cars.

When Springer neighborhood vehicle traffic encounters the blocked crossing at Outer Springer Loop, drivers must either wait hours for the crossing to clear, or turn around and drive about 3 miles



A gravel train loads at the tippel of AS&G's Birchwood gravel pit soon after it opened in 2009. (by Dave Blazejewski)

to Inner Springer Loop to access the highway. When Inner Springer is blocked 20-30 minutes as the final cars load, drivers must take another roadway to access the highway.

Multi-agency Partnerships

The Alaska Railroad, Alaska Department of Transportation & Public Facilities (DOT&PF), City of Palmer and Matanuska-Susitna Borough have discussed various solutions to blocked crossings over the years. The timing of gravel train activity has been modified, taking into account gravel customer requirements, Anchorage noise ordinances that prohibit industrial activity between 10 p.m. and 6 a.m., scheduling other passenger and freight train traffic, and other factors. Likewise, gravel train operations have been revised, such as splitting the train in half at Inner Springer Loop. With operational solutions exhausted, interested parties have sought infrastructure changes that will improve safety and convenience to the traveling public.

The gravel train issue at Outer Springer Loop is part of a larger issue for the Alaska Railroad – improving safety at all locations along the Glenn Hwy where neighborhood side streets cross the railroad tracks. In line with this long-term safety vision, the DOT&PF has considered the railroad as part of its Glenn Highway MP 34-42 Reconstruction project. The DOT&PF project will reconstruct the highway to accommodate increasing traffic, to include adding lanes, widening shoulders, installing turn pockets and addressing other traffic and safety improvements, such as road/rail crossings. The design phase kicked off in October 2011. The project concluded environmental re-evaluation in 2014.

As part of the design process, the project team worked with a multi-agency Diagnostic Team (DT) comprised of engineering and traffic experts. The team identified possible options to address gravel train activity at Outer Springer Loop, and studied recommendations for improving all road/rail crossings between MP 34 and 42 of the Glenn Highway.

Exploring New Solutions

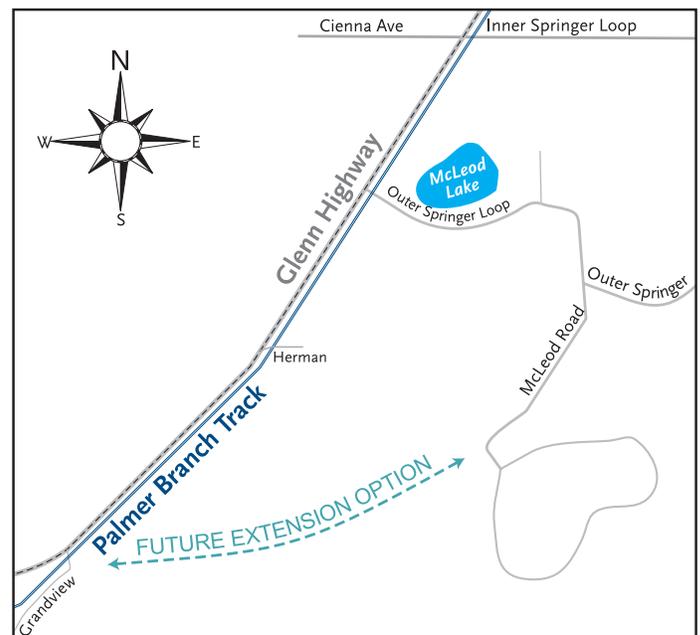
The DT report recommended construction of a connector between Outer Springer and Inner Springer loops to maintain access across the tracks during train loading. Connector options were:

1. Extend Mystic Circle a half-mile to connect with Inner Springer Loop, thereby reducing the distance to an alternate outlet by at least 2 miles. This option met with strong resistance by local impacted land owners, resulting in its elimination from the project.

2. Build a new frontage road along the east side of the tracks, adjacent to the eastern edge the Alaska Railroad's right-of-way (100 feet on either side of the track). This option posed considerable safety risks to drivers who would have to navigate traffic flowing from the highway onto Inner Springer Loop. Unacceptable risk factors eliminated this option as well.

Possible long-term solutions to address railroad conflicts along the entire project corridor are:

- grade-separate (overpass or underpass) one or more highway-railway intersections;
- extend McLeod Road to the Grandview Road intersection with Glenn Highway, thereby eliminating some railroad crossings (see map below).



DOT Project Status

Construction on the first phase of DOT's Glenn Highway Improvement Project (Outer Springer north into Palmer) began in 2018. The second phase (Outer Springer south to the Interchange) is slated for construction in 2022.

ARRC is working with DOT on both phases of the project to upgrade and signalize the crossings adjacent to the major roadway intersections slated to get traffic signals.

The second phase of the Glenn Highway project will improve safety by consolidating at-grade railroad crossings, extending a frontage road on industry property, building a new rail siding and developing a new signalized median opening (see map on the next page).



A gravel train travels from Mat-Su to Anchorage early fall.



DOT's Phased Glenn Hwy Project

- Phase 1 - construction substantially complete in 2019
- Phase 1 finishing work in 2020 includes raised medians, path paving, landscaping and signage
- Phase 2 - construction in 2022

The current gravel train operation and planned action related to the DOT&PF's Glenn Highway Improvement Project.