

# A Centennial History of the Alaska Railroad

It is interesting to note that the Holy Grail of Alaskan, rail history books, the two volume, 1558 page “The Alaska Railroad” by Bernadine LeMay Prince, is now becoming quite dated. So much time has elapsed since its publication in 1964 that it now covers only 40% of the history of the railroad. The book, “Railroad in the Clouds” by William H. Wilson, published in 1977 only covers the history through 1945. Finally, the 1967 book by Edwin M. Fitch, “The Alaska Railroad” is a wonderful look at the railroad and its role as a federal agency, however, it too, ends much too soon to capture many of the events that led to the railroad’s future and the dramatic changes that took place to create that future. There are several other pictorial books concerning the railroad, however, there really is no current history of The Alaska Railroad that covers the post-1964 earthquake period. John Combs of John’s Alaska Railroad Page, [www.alaskarails.org](http://www.alaskarails.org), asked us to write an updated centennial history of the Alaska Railroad that looked at its past but also takes a fresh look at the events in the seventies, eighties and nineties that began to change the railroad into what it has become today.

To do this , we structured this review into six chapters. The first three look at the building of the railroad, its struggle to survive its first two decades and its revival that began before World War II, the subsequent rebuilding that resulted from that war and the its successful comeback from the destruction caused by the 1964 earthquake. Most of the information in these chapters is derived from the three histories cited above as well as other historic documents that are available from public sources.

The second three chapters bring us up to the present with a look at the economic boom resulting from the transition of Alaska to an oil based economy during the 1970s, the creation of long-term industrial revenue sources and new ways to support a viable passenger business along with its transition to a state owned corporation in the 1980s, and the building and operation of a fully modernized railroad that began in the late 1990s and continues to the present.

## 1) Prelude: Construction

The Predecessors to The Alaska Railroad were the Alaska Central Railroad and the Tanana Valley both of which began construction in 1904. The Tanana Valley’s objectives were straightforward. It’s promoters simply sought to link the Chena River steamboat terminal in Fairbanks with gold fields north of town in the vicinity of Chatanika. However, the Alaska Central took a much grander world view that originally sought to build a railroad from Seward to coal fields in the Matanuska River Valley and then on into the interior of the Territory in search of other resource development opportunities. These ambitious, but underfunded, plans caused the Alaska Central to enter receivership in 1908. In 1910 It was reorganized as the Alaska Northern Railroad under which name, it finally had built, by 1915, about 71 miles of track to Kern, just south of today’s Girdwood. Both of these railroads would soon become important elements in The Alaska Railroad’s construction.

In 1912 Congress passed a law authorizing the President to appoint a commission to investigate the transportation problem in Alaska. In 1913 that Commission recommended constructing two railways, one from Cordova to Fairbanks and the second from Seward to the Iditarod River

The first of the two proposed routes envisioned use of the Copper River and North Western Railway, a subsidiary of Kennecott Copper Corporation. It had been completed in 1911 to access copper mines in the Kennecott Glacier mining district 196 miles from Cordova near the present location of the town of McCarthy. The Commission envisioned using the CR&NW as far as their station at Chitina at about the midpoint of their line. Beyond that point, a new railway would be constructed to Fairbanks which was near the head of navigation on the Tanana River and would provide access to other Alaska interior locations via the Tanana and Yukon rivers. The second recommended route would require construction of a new railroad from the northern most point of the Alaska Northern to Fairbanks and beyond.

In 1914 Congress passed enabling legislation and appropriated \$35 million to construct and operate a railroad in Alaska with the President to select the route. This act also provided for the transfer of railway and construction equipment from the Panama Canal to Alaska since the canal was just being completed. To carry out design and construction of the new railroad, the Act also created the Alaska Engineering Commission (AEC).

Soon thereafter, AEC survey teams were dispatched to Alaska to provide more detailed looks at the various routing options. The AEC provided a report to the President on several potential routes along with estimates of the cost of each. The two main routes that emerged from this work and that were proposed for final consideration were one from Cordova or Valdez to Fairbanks and one from Seward to Fairbanks. President Woodrow Wilson ultimately selected the Seward to Fairbanks route, partially because construction could be started and supplied from three intermediate points along the line. All of the other options would require most work to be undertaken from one point of supply almost ensuring a longer construction period. It was also felt that the selected route would be more likely to have developable land opportunities than would a route which had to immediately deal with the very rough coastal mountain ranges before moving inland. The latter appears to have proven to be an important part of the decision since today, the territory along The Alaska Railroad contains about three-quarters of the population of the state.

The first step in implementing the creation of the new railroad was the purchase of the Alaska Northern Railway in 1915. This provided a crude, but useable line over the most difficult mountain crossing on the ARR's route and also guaranteed access to the ANR's Seward dock for movement of rail equipment and construction supplies.

After completing a survey to finalize the details of the railroad's route, the selection of a number of construction base camps was the next step undertaken by the AEC. Ship Creek (now Anchorage) was selected as one of the construction bases because it was the farthest north point along the railroad that had ocean access (for about eight months of each year at that time)<sup>1</sup> to bring in materials and was also a point from which work could progress both to the north and south. Other construction bases were also set up at Talkeetna, on the Susitna River, and Nenana on the Tanana River. Both points could be accessed to bring in materials in the summer months by riverboats and both could be used to construct the railroad in both directions from the base camp.

Also, in 1915, the first physical construction of the railroad along with the rehabilitation of the Alaska Northern began to take place. That year, 15 miles of track was laid northward from Anchorage to the Eagle River where a major bridge was needed to cross the river. Thirty-four miles of roadbed grading was also completed. An additional three miles of yard track was installed in Anchorage and construction began on the facilities needed to house a railroad and the people who would build and operate it.

In 1916, base camp at Anchorage quickly grew to 2,000 people. That year, the railroad also constructed 30 new buildings in the town including shops, a depot, office facilities, maintenance facilities, employee housing and service facilities and other supporting structures. All of these permanent structures suggested that the camp was destined to be something more than a temporary construction location.

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<sup>1</sup> It was not until the early 1960s that ships began to be either built or modified to deal with the ice in Upper Cook Inlet during the most severe months of winter. Only after these technical modifications were introduced was Anchorage able to reliably operate as a year-round port.

Among the service facilities in Anchorage was a fully equipped hospital. AEC also built other hospitals, including one in Nenana that was quite large and served the construction base at that location. This speaks to the hazards of the day both in the railroad business and construction in the wilderness<sup>2</sup>.

The Railroad also began a the sale of land parcels in many places along the railroad to promote settlement and, hopefully, to help develop agriculture, mining or industrial activities that would provide the railroad future traffic. The additional population that would come with these developments would need supplies which would also provide the railroad with haulage opportunities.

During 1916 rehabilitation of the Alaska Northern continued and 100 main line miles of new roadbed grading was completed along with 60 miles of new main line construction. Additionally, the most immediately needed portions of the work to establish the new Anchorage Terminal were put into place. The main line construction included 10 more miles southward from Anchorage toward the connection with the Alaska Northern as well as 50 additional miles north to Matanuska and on the branch line toward the Matanuska River coal fields. On August 17, the first carload of coal was loaded at Moose Creek along the branch. By the end of the year, the mine at Eska was also loading coal and the end of track at Chickaloon was in sight. Finally during 1916, the first new freight equipment that AEC had ordered from the states began to arrive and was put into service. The new grading undertaken that year included the beginning of the project to cut a shelf near the base of the mountains along Turnagain Arm to connect with the Alaska Northern main line that was progressing northward from Kern.

On the north end of the ARR, the Tanana Valley Railway was experiencing a gradual decline in business and entered receivership in 1917. It was then purchased by the AEC to be used as the Fairbanks terminus along the Chena River. By late 1921, the narrow gauge line would be extended by AEC all the way to Nenana to connect with the rest of the railroad and to provide through service to Fairbanks with freight and passengers needing to be transloaded from standard to narrow gauge equipment in Nenana. With the completion of the Tanana River bridge at Nenana during 1923 the line into Fairbanks was converted to standard gauge with about 7 miles of rail line from Fairbanks to Happy retaining a third rail to accommodate both standard and narrow gauge equipment. Traffic to the gold fields continued to gradually decline and the narrow gauge was abandoned in 1930 during the early days of the Great Depression<sup>3</sup>.

In 1917, the AEC officially moved its headquarters from Seward to Anchorage ensuring that town's status as the long term headquarters and operations center for the railroad. On the south end of the railroad, much of the rehabilitation of the Alaska Northern was completed, including upgrading the Seward dock. South of Anchorage, the line was extended another 13 miles to the approximate location of today's Indian. A supply center for this work was also created at today's Rainbow to support both the heavy construction requirements and continued rehabilitation work on the Alaska northern. Creation of the a fully serviceable rail line at the foot of the mountains along Turnagain Arm and through the Kenai Mountains was proving more difficult than had been originally anticipated.

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<sup>2</sup> Regretfully, no hospital exists in Nenana today.

<sup>3</sup> However, all traces of the narrow gauge did not immediately disappear. Early in the 1960s it was still possible to find reminders of the narrow gauge around the Fairbanks yard, including, a set of narrow gauge wheels outside the ARR yard office and an abandoned customer siding that still had three rails for both standard and narrow gauge equipment. Even today, bits of the Tanana Valley are still with us including two locomotives. One is an 0-4-0T that is active in a Fairbanks park. The other is the first locomotive purchased new for The Alaska Railroad; a 1920 Baldwin 4-6-0, number 152, that remains in active service on the Huckleberry Railroad in Michigan.

North of Anchorage, work resumed on the main line after completion of the branch to all of the coal mines in the Matanuska Valley. By the end of the year, the main line was in service for 52 miles north of Matanuska. Also begun in 1917 was construction of permanent buildings for the terminal in Fairbanks. After acquisition of the Tanana Valley Railroad, work began on grading to right-of-way that met standard gauge requirements toward Nenana from Happy, the junction point with the former Tanana Valley line to Chatanika.

Several external challenges faced the railroad's construction in 1918, including-

- In early 1918 many AEC management employees and almost 50% of the workers enlisted in the Armed Forces for World War I. This created considerable churn in the work force. Many additional employees had to be recruited from the Continental US, however, this was also increasingly difficult because of the war and, as a result, caused a continuous worker shortage on into early 2019.
- Also in 1918, the Spanish flu epidemic was raging. Quarantines, and other measures, attempted to protect the construction camps, but the flu eventually prevailed and also slowed construction. This problem would crop up in various locations along the railroad as late as 1920.

In spite of these handicaps, good progress was made on construction during 1918. On the south end of the railroad, the gap between the Alaska Northern and the line being built south from Anchorage was finally closed on September 10. On the north end, track extended almost to Talkeetna by year's end. The grading was completed almost to Nenana for the temporary extension of the Tanana Valley Railroad south to the Tanana River. Finally, 37 miles of new track was completed from Nenana south toward the Healy coal field.

Operationally, by the end of the year, regular service was being offered between Anchorage and Seward and from Anchorage to the Matanuska River coal fields and a small amount of the coal from those fields was beginning to be used by both merchant ships and naval vessels in addition to that required for local use.

In 1919 Congress failed to pass appropriations to fund the railroad construction until July 11 and, as a result, much of the work season was lost. However, even with this handicap, some progress was made toward completion. Construction north from Talkeetna added another 12 miles to the main line and the line being constructed southward from Nenana reached the north entry into the Nenana River canyon just south of Healy and the 4 mile branch to the Healy coal fields was completed. Finally, the narrow gauge line from Fairbanks was completed to North Nenana with the objective of placing it in service to Nenana when the river was frozen during the following winter.

All of this left 122 miles of difficult main line to be built with the principal obstacles being a number of large and complex bridge projects needed to span major rivers or deep valleys and the rock work required to transit two major river canyons.

Even with the delay caused by congressional inaction, other endeavours that could only be successful with the presence of an operating railroad had begun to happen. One of the first was the establishment of the Matanuska Experimental Station in 1917 to try to develop agriculture in the Matanuska Valley.

Mt. McKinley (now Denali) National Park was also established in 1917 and, within four years, the railroad would traverse the eastern boundary of the Park along the Nenana River. McKinley Park became, and still is, to the Alaska Railroad what Glacier National Park once was to the Great Northern Railway, their largest single tourist destination.

The years 1920 through 1923 were the big years for the final push to complete the northern end of the railroad through to Fairbanks. The key to accomplishing the task was the completion of several large, and complex bridge construction projects as well as two tunnels and about 15 miles of heavy rock work to get through the Nenana and Indian River canyons. The sequence of events to accomplish this final 3-1/2 year push were as follows:

- In 1920 the main line was built as far as the Susitna River bridge a mile beyond Gold Creek. Additionally, supplies were ferried around the bridge site and 10 miles of track beyond the bridge, to Chulitna, was completed. As part of the construction of this 10 miles the rock work and four additional, smaller bridges were completed in the Indian River canyon. Work also began on the foundation piers for the Hurricane Gulch bridge.
- The Susitna River bridge was built when falsework could be anchored into the river ice during the winter of 1920-1921. The bridge was completed on February 6, 1921. At the time it was built, this bridge was the longest, single span, truss bridge west of the Mississippi River. It would only hold this title for three years until the Tanana River bridge in Nenana was placed into service.
- Rock work through the Nenana River canyon was begun along with grading as far as Riley Creek which would also require a substantial bridge.
- Once the Susitna bridge was complete, the main line from Chulitna north to the Hurricane Gulch was put into service and steel work began on the Hurricane Gulch bridge. The bridge was completed in August, 1921 and by September the main line was in place to Broad Pass
- In 1921, the rock and tunnel work in the Nenana River Canyon and the main line was completed between Nenana and the Riley Creek bridge site. By the end of the year the main line from Anchorage was also completed to the south side of Riley Creek. The bridge over Riley Creek was completed in February 1922 and the first through train from Seward to Nenana arrived at its northern terminus on February 5, 1922. Through passengers and freight could be transported to Fairbanks by crossing the Nenana River on a boat in the summer and by rails laid on the ice in the winter.
- Completion of the bridge at Riley Creek meant that the coal mines at Healy could also start shipping coal south as well as north to Nenana and Fairbanks.
- In March of 1922 the first through tariffs were put in place with the Alaska Steamship Company. This permitted shippers to prepare a single bill-of-lading to move goods between Seattle and any point served by The Alaska railroad including the river locations served by boat from Nenana.
- Also in March of 1922 the Secretary of the Interior selected the name of the railroad, upon completion, to be The Alaska Railroad.
- With the railroad finally in Nenana, work on the bridge across the Tanana River could start in earnest. The bridge was built during the winter of 1922-1923 when false work to support the trusses could be anchored in the ice. The bridge was completed on February 27, 1923. When it was opened for business, this bridge became the second longest single truss span in the United States with only a bridge over the Ohio River being longer by a few feet.
- The line from North Nenana to Fairbanks was standard gauged with work being completed by June 15, 1923 allowing through trains to operate over the entire Seward to Fairbanks route.

President Warren Harding arrived in Alaska on July 13, 1923 and drove the Golden Spike officially completing the railroad at North Nenana on July 15, 1923. He was the first President to visit Alaska. He

stayed in Alaska only a short time and, upon leaving, continued on a tour of the West Coast. He died in California on August 2, 2023 less than three weeks after driving the Golden Spike.

It is interesting to note that the Tanana River extends northeast to Fairbanks, but running the ARR main line along the river was not the route chosen for either the railroad or, fifty years later, the Parks Highway. The reason for these decisions are not fully known, however, it may be due to the unstable nature of the soil of the cliffs along the north side of the river combined with the tendency of the river to flood the land to the river's south side.

As was briefly mentioned most of the early locomotives and freight equipment for the Alaska Railroad were transferred north from the Panama Canal Zone. This included eighteen, 200 series and seven, 600 series 2-6-0 locomotives that were built to 5 foot gauge. Upon arrival in Alaska, it was necessary to install wider driver tires on the locomotives that would permit them to operate on standard gauge track. All of the freight equipment imported from Panama required their wheels to be pressed further onto the axles in order to permit them to operate on The Alaska Railroad.<sup>4</sup> The Panama locomotives, particularly the 600 series, served as important components of the Alaska Railroad fleet into the early 1940's with the 600 series doing much of the road work, particularly on passenger trains, and the 200 series doing most of the switching along with occasional branch line or local freight service.

The Panama revenue freight equipment brought to Alaska in 1918-1919 consisted of over 660 flat cars, some of which the AEC and later, the ARR, converted into 158 gondolas for coal service, as well as 21 insulated, heater equipped box cars, 4 double door auto box cars and 3 standard box cars. As such, they became the foundation for much of ARR's early freight and Less-Than-Carload (LCL) service. Also coming north from Panama were railroad cranes and ditchers, side dump cars and other work equipment which also continued in maintenance service well after construction was officially finished. Indeed, in 1946, the two largest categories of freight cars on ARR were still 200 Panama flat cars and the 150 Panama flat cars that had been converted to gondolas. Some could be found in work trains into the early 1950s.

Another source of used equipment became available with the demise of the Colorado Midland Railway in 1920. When that railroad's owners put its equipment into the used market in 1921, The Alaska Railroad bought 4 cabooses and several passenger cars. Most importantly, CM had a rotary snowplough that matched the ARR's needs. Like the Panama flat cars, the Midland's rotary and at least two of the cabooses became long-term residents of Alaska. The rotary remained active into the 1960s and a photo of one of the 1887 vintage cabooses in work train service has been found from as late as 1950.

In addition to the equipment coming to Alaska from Panama, the AEC also purchased a substantial amount of new freight equipment from Seattle Car and Foundry. Their order included 55 flat cars, 50 box cars, 6 refrigerator/heater cars, 10 cabooses and 1 business caboose, number A-1. As with the Panama equipment, many of these cars were converted to different uses over their years of their service<sup>5</sup>. All of this equipment was conveyed by AEC to The Alaska Railroad. Like their Panama brothers, many of these cars, or their converted siblings, remained in active service up into the 1950s.

In spite of weather, politics, war, lack of funding, floods, a pandemic and labour shortages, The Alaska Railroad was officially up and running.

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<sup>4</sup> Volume 1 of the Bernadine Prince ARR history , p.182, suggests that most of the gauge changes to the freight car trucks were accomplished in the Balboa, Panama shops prior to shipment of the equipment to Alaska. However, the modification of almost 200 of the Panama flat cars into other car types was performed entirely in the new Anchorage car shop.

<sup>5</sup> 15 of the flat cars were converted to high capacity side door gondolas for coal service for ARR's locomotives. An additional 5 of the cars were converted to stock cars. 15 of the box cars were converted to various types of work equipment for maintenance of way, wreck trains and to work with snow removal equipment.

## 2) Creating the Railbelt

The Alaska Railroad was up and running, however, it remained unclear what it was running for and whether it could generate the annual cash necessary to sustain a railroad of its size, operating in a harsh environment with outdated equipment and with infrastructure that, although officially pronounced as being complete, was still at a stage of development where much remained to be done to make that “completed” railroad a property that could operate efficiently and could effectively serve its customer base. But, that customer base was a big part of the problem. There really was not much of a customer base that actually existed.

As the ARR was originally conceived it was designed to be a key agent that would support development of a more economically diverse and prosperous Territory. Those who proposed creation of a railroad in the wilderness were not so naïve as to believe that it could work its magic without some basis to support operations during the interim period needed for the Central Alaskan economy to reach a size necessary to sustain a railroad the size of ARR. They realized that while a healthy railroad does not necessarily require a large population base to prosper, if it does not have that population base, it needs either an industrial base or a resource extraction base along with a market for those resources if it is to be successful. The latter, resource extraction, is what they expected would initially support the Alaska Railroad and that resource they counted on to do the job was coal, specifically, Matanuska River coal. The market for that coal would be the United States Navy.

Between the later 19<sup>th</sup> Century and 1910 two series of events took place that made it clear that the United States would need to dramatically strengthen its position in the Pacific. These were:

- The acquisition by the United States of a group of colonial possessions around the Pacific rim including Alaska, Hawaii, the Philippines and a number of islands throughout the region, and
- The emergence of Japan as a major naval power in the Pacific arena.

All of this, taken together, meant that if the United States was to be prepared to properly defend its continental West Coast along with the possessions it had acquired in the Pacific region, the navy would need to expand its horizons and become a two-ocean fleet. If it was to do this, it was essential that it have fuel sources in the region to support the Pacific fleet. In 1910, that meant what the navy would need was a source of high quality coal as close as possible to the West Coast.

No source existed on the West Coast of the Continental United States. In fact, the vast majority of the high quality coal that was used on the West Coast of the U.S. came from Vancouver Island, in Canada. The rest came from coal fields in Utah and Colorado, 700 to 1000 miles from the coast. The only known North American West Coast, U.S. controlled coal of the quality and quantity needed by the navy was in two coastal coal fields in Alaska. These were the Bering River field east of Cordova and the Matanuska River field northeast of the area that would become Anchorage. The Bering River field had already been placed off limits to development for conservation reasons leaving the Matanuska River field as the sole source capable of satisfying the navy’s fuel requirements. Thus, immediate national defense requirements played a significant role in the location of The Alaska Railroad and also in the ability to get public dollars allocated to its construction. From the prospective of the developers in the Department of the Interior, the defense requirements became the key to having a resource development project that could sustain the railroad until other economic growth could provide the rail traffic demand needed for a self-sustaining entity.

The eventual problem with all of this was that, by World War I, the navy had decided to convert the entire U.S. fleet to burn oil fuel. Thus, even though a few naval vessels did take on loads of Matanuska River coal, and that coal did perform well, by the time The Alaska Railroad was completed, the naval

market for coal that was supposed to sustain the railroad until other development could mature, had disappeared. This left the railroad with the need to find substitutes for the coal business as well as cut costs so as to be able to survive until alternatives to the naval coal market could be identified and developed. The result was that for most of the next 18 years after “completion” the railroad struggled simply to survive. This meant that post-“completion” work on the infrastructure and equipment that would normally take place simply could often not happen since the money did not exist to do the work.<sup>6</sup>

Indeed, many of the problems resulting from this incomplete “completion” would continue to haunt the railroad until the early 1950s. The fact that The Alaska Railroad emerged from this time of troubles in better condition than it was at the time of “completion” is a tribute to the dedication, tenacity, imagination and capabilities of the railroad’s employees.

The population of the Railbelt area at the time of “completion” of the railroad was exceedingly small. A travel information brochure published by the railroad somewhat later provides a look at the number of residents in the largest areas adjacent to the main line using 1920 census statistics. There were only four areas with a substantial population;

Seward – 835, Anchorage – 2,277, Matanuska-Susitna Valley – 920 and, Fairbanks – 2,101.

This suggests that the total population along the entire railroad was no more than about 7,000 to 7,500 people whose personal need for goods was unlikely to be enough to support a 540 mile railroad unless there were a considerable number of resource extraction or industrial production operations that these people were serving.

Unfortunately, these operations did not exist at that time other than the production of the Matanuska River and Healy coal fields and, with the navy’s abandonment of coal, these producers had only the tiny local market in which to sell their products. In fact, The Alaska Railroad’s locomotives and electrical power plants were the largest consumers of the coal that the railroad was hauling out of the mines.

Even by 1939, on the eve of World War II, the Railbelt had a population of only around 15,000 people. Fairbanks had 5,692 (due to the resumption of gold mining operations in the area) and Anchorage a population of 4,229 compared to populations of 4,695 for Ketchikan, and 5,729 for Juneau. The Alaska Railroad had a slim existence serving such a small population base. But Anchorage was now at least on the map and would start growing rapidly and become the center of activity along the Railbelt beginning in a bit over two years.

Between those two census measurements, the railroad was slowly developing business, particularly coal for power plants, home heating and to feed the railroad’s locomotives. The Matanuska River mines at Sutton, Jonesville and Eska served the Anchorage market while Suntrana (near Healy) supplied the Fairbanks region. The railroad had developed a river port at Nenana to supply fuel (including Suntrana coal) and other goods to villages along the Tanana and Yukon rivers and sometimes, even along the Bering Sea coast. The sternwheel steamboats and barges in this service were operated by The Alaska Railroad.

In the Matanuska-Susitna Valley, an agricultural area developed around Palmer and Wasilla and began development with the objective of at least partly feeding the population served by the railroad and its interior connections.

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<sup>6</sup> The ARR “completion” left a significant amount of the railroad in a condition of temporary operability. This included temporary bridges that needed long-term replacement, unstable roadbed in some locations, mostly second hand equipment that was costly to maintain and was inefficient at handling the business that was available, track geometry that resulted in very low speed operations that required excessive equipment and more operating employees than should have been required for the traffic density and size of the railroad, etc..

The Alaska Railroad became a critical component of a complete supply chain stretching from Seattle to much of the interior of Alaska. Freight was loaded aboard Alaska Steamship Company vessels in Seattle which then sailed north to Seward where they would transfer cargo to the Alaska Railroad for delivery along the Railbelt or perhaps even to Interior river points via the railroad's steamboat and barge operations.

The railroad also set about developing facilities that would encourage passenger operations aimed at the tourist market rather than just local travel. Its hotel at Curry, although originally built to house train crews out of Anchorage and Healy at the end of their runs and to provide overnight accommodations for passengers traveling between Anchorage and Fairbanks, quickly developed into an attractive, comfortable location to enjoy the "wilderness" and began serving recreational tourism. Although the Curry hotel was destroyed by fire in the mid-1950s the tourism that it pioneered remains an important source of revenue for the railroad up to the present day.

The McKinley Park hotel opened in 1939 and over time the Park became the magnet for drawing tourists from all over the world to the railroad. The original hotel burned down in 1972 but with assistance from the railroad, this important tourism facility, was quickly rebuilt over the winter and reopened in 1973 with modular units and eleven older rail cars acquired from the Alaska Railroad being used for rooms, a snack shop, bar, gift shop, hotel offices, an employee dining room and commissary. As private hotels began to proliferate outside the Park along the Parks highway, the hotel was closed in 2001 and removed. But Denali Park remains the biggest tourism draw on the railroad. With hundreds of rail passengers arriving and departing every day during the summer.

As the great depression started, the government began encouraging settlement in Alaska. The Palmer/Wasilla area became the agriculture and dairy belt of Alaska and by 1940 had the third largest population on the Railbelt surpassing Seward with nearly 2,000 people.

The forest products business also developed a bit, although the Alaska Railroad was never a big forest products originator. However, up through the early post-war era, much of the local building was done with locally sourced lumber. For some, including those who lived in log houses, local timber was a part of both construction and maintenance purchases even into the 1960s and 1970s and, for the basic logs, this remains the case even today.

The railroad itself contributed to the economic development of the region by growing its shop and operational facilities and its headquarters in Anchorage. This growth meant that there was an increased demand in the area for housing and supplies for individual employees. This, in turn, further contributed to the demand for the railroad's services to help meet their needs for consumer goods. Another, even more important benefit which accrued directly to the railroad and its employees, was to decrease the total cost of operation with the ability to bring more repair and construction work "in-house" rather than having to frequently resort to outside contractors, particularly ones in "the states", to provide needed services.

In 1937, Alaska and the ARR began, in a rather strange way, to feel the first impact of the coming war. Germany, by its actions in the Rhineland along with the international unease being produced by its aggressive posture toward Austria and Czechoslovakia and the war that had already begun in the Pacific with Japan's invasion of China, had fostered sufficient nervousness in the financial world to begin driving the price of gold upward after years of decline. That decline had almost eliminated activity in the Chatanika gold fields. However, the rebirth of a healthy gold market along with the expectation that the worldwide unrest would continue to support that market marked a rebirth of many gold production areas.

The new Chatanika boom was of a completely different nature than was its predecessor. The first round of extraction had been a typical western U.S. gold rush with most of the early “mines” being worked by individuals or small consortiums of miners. This second round, which would need to deal with a generally lower grade on ore would see larger dredging machinery and more automated processing than anything previously used in the Chatanika field. This, in turn, created many more opportunities for ARR to haul equipment and industrial quantities of supplies to Fairbanks than had been available during the previous round of gold seeking. Work continued in this field until the last dredge was shut down in 1962.

By the mid-to-late 1930s all of these endeavours, and many others, were beginning to have an impact. Also having an impact was the conservative approach to spending operating funds by the railroad’s General Manager, Otto Ohlson. Operating losses in 1930, Ohlson’s first full year as General Manager, were over \$1.2 million. By 1933, they were down to only \$250,000. The turnaround finally came in 1938, when for the first time in its existence, The Alaska Railroad showed an operating surplus - \$76,703.69. While 1939 would show a small deficit of \$20,000, it would be the last time that this happened until 1946. From 1939 forward, the railroad would usually have operating ratios below 100.

In 1926-1928 The Alaska Railroad received its second built-new locomotives and the first new standard gauge power, 2-8-2 locomotives 701, 702, and 703. They also ordered and received 4-8-2 locomotive 801 in 1932. Those were the last new steam locomotives until World War II. These new locomotives were much larger and more powerful than the Panama Canal 2-6-0 locomotives in either the 200 or 600 series. They were used on the larger, heavier, but fewer trains where two of the smaller locomotives (or two trains) would otherwise have been required. Perhaps, just as importantly, these larger locomotives were much better at dealing with snow in the winter and, from the crew’s point-of-view after delivery of 801, provided a much more comfortable working environment than did the Panama machines, due to its “all-weather”, Canadian style, enclosed cab<sup>7</sup>. But it is still clear that these years were lean when a railroad that was relying almost entirely on very small, inadequate, second hand motive power to operate through some of the most challenging country and harshest weather in North America only had the resources to acquire four new locomotives over a span of nearly 20 years.

During the latter portion of this period the railroad began to improve its passenger fleet in order to meet the requirements of a more tourist based service. This included acquisition of ----- steel cars. While tourists desired a “wilderness experience” when they went to Curry, most did not want that experience to begin with a ride on a 30 to 40 year old wooden, coal stove heated, passenger car when they boarded in Seward or Anchorage. Upgrading to meet the demands of the available passenger market was as essential then as it has been in more recent times.

By the 1930s, the railroad was also beginning to acquire higher capacity freight equipment to begin replacement of some of the Panama cars who were nearing 30 years in age. The first of the freight car acquisitions, in 1930, were 50, all steel, 50 ton capacity, twin hopper cars that were assigned to the mine at Suntrana for movement of coal to Nenana and Fairbanks. All of these first upgrades were second-hand cars from other railroads or used freight car dealers. In 1934, they were supplemented by 20 additional twin hoppers which were ARR’s first, all steel, brand new cars. 25 additional second-hand cars would also be added to the fleet in 1940 and 1941, just before the outbreak of World War II. Like the original 50 twin hoppers, all of these additional cars were assigned to the north end of the railroad and reflected the requirements for additional coal in Fairbanks both for electrical generation and home heating. They were also a part of a public service unique to Fairbanks – the provision by the city utility of steam heat for buildings, both commercial and residential, in the city center.

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<sup>7</sup> All subsequent steam locomotives, after 801, that were ordered new by ARR would have these cabs. The locomotives built to U.S. Army specifications and those bought used from other railroads would not. 701, 702 and 703 would all eventually be rebuilt by the Anchorage shops with all-weather cabs.

The next additions to the freight fleet were 32, 50 ton, steel frame, wooden body box cars acquired from the Copper River and North Western when that railroad ceased operation in 1938. These were followed, in 1940, by 19, 50 ton all steel flat cars. Interestingly, 9 of these cars were converted into insulated, heater equipped, box cars that were used primarily as LCL cars, mostly in passenger trains where they supplemented 6 former Panama flat cars that had been similarly rebuilt and were also equipped for passenger train service. Finally, in 1940, ARR acquired 20 new, 50 ton, steel frame, wooden body box cars and 5 new steel frame, wooden body cabooses.

Clearly, times were improving and two decades of troubles seemed to be ending. However, the reality of a new, looming war and the traffic boom provided by that war would come close to undoing all of the progress that, to date, had been so painfully made.

### **3) World War II, Rehabilitation, the Rise of Anchorage, and the Earth Shakes**

During this period of just over 20 years so much happened that it is being broken into four subchapters.

#### **3.a) World War II and the rise of Anchorage**

The conflict that became World War II began in Europe in 1939 with the German and Russian invasion of Poland. Ironically, that was the first year that The Alaska Railroad began to actively participate in activities that eventually led to its role in World War II. That participation was rooted in greater military interest in Alaska caused by its geographic relationship with both Japan and the Siberian portion of Russia.

In 1939, the US was beginning to emerge from the economic decline of 1938, the last full year of the Great Depression. That year, for most of the country, it was the European conflict that stirred up interest in defense funding both for the U.S. military and for potential European allies. However, it was the aggressive activities of Japan in China and the instability that caused throughout the Western and North Pacific Rim that had begun much earlier in the decade that first stirred the military's interest to Alaska. The result was that 1939 would see the initiation of a number of projects that would be the foundation of not only Alaska's participation in World War II but would continue to be critical to the subsequent Cold War and would only gain in importance as the Soviet Union first became more aggressive, then eventually collapsed from within, relabelled itself as Russia and tried, but failed to bring democratic norms to the country, and then transformed itself into today's, once again, more aggressive Russian Federation .

In 1939 several major projects either began construction or started to take shape. These projects would be the foundation of the long-standing relationship between the railroad and the military and the source, in one form or another, of a very significant amount of business for the railroad. From south to north, the 1939 events that began the railroad's participation in the war were:

- The Army's Transport Service arrived in Seward to add capacity to and then manage military operations for their cargo moving over the railroad dock;
- The most important of the changes beginning in 1939 was a serious study by the railroad's newly reformed Geological and Mining Department of the feasibility of, and options for, location of a cut-off from Portage to Prince William Sound. Route alternatives were examined and possible locations for a port on the east side of the mountains were assessed. This project was one that the railroad's management had considered for several years. However, without the resources and requirements of the military, the expense to implement a project of this size and scope could not be justified and the project could not be funded without the military because of political opposition;

- A few miles north of the Anchorage depot, near Whitney, a short branch was begun to what would become Elmendorf Army Airfield and also its adjacent Army installation, Fort Richardson (now Joint Base Elmendorf-Richardson). Eventually, this facility would become the headquarters for Alaska Command that oversaw all military operations in the territory;
- Finally, the railroad constructed a 4-½ mile branch from a point about ½ mile south of the Fairbanks depot to Ladd Army Airfield (now Fort Wainwright) as well as 1-½ miles of track serving various facilities on the new air base. During the war, this facility would become an exceptionally interesting place as it was the location where American made military aircraft would be transferred to Russian crews to be flown across the Bering Strait with their ultimate use being against Germany. The line would eventually be extended an additional twenty-four miles to North Pole and Eielson Air Force Base. In the 1970s an additional 10 mile branch from Fort Wainwright would be built to Fairbanks International Airport.

All of these projects continued into 1940, even the small 1939 Seward dock renovation which had to be redone due to construction errors the previous year. All of this work contributed to the railroad's increasing traffic base but also provided the funding necessary to undertake upgrading projects that had been waiting in the wings, sometimes for years. For the first time, the railroad could consider doing some of this work from its own income since revenues were now regularly exceeding operating costs. By the end of the year there would be a surplus of almost \$350,000 on hand for further work

It also brought new roles to the railroad's facilities such as the Anchorage Railroad Hospital which began serving as the principal medical center for all U.S. government employees, including the military, until additional capacity could be built either privately (the original Providence Hospital at 8<sup>th</sup> Avenue and "L" Street in Anchorage) or on the new military posts such as the Army hospital at Fort Richardson. In a very real sense, the military was the beneficiary of the groundwork done by the railroad over the last two decades. Rather than raw, start from scratch development process for their projects, they could build on and expand existing infrastructure and supply chains and also utilize existing, local expertise. This allowed them to complete projects in months that otherwise might have taken years.

Most importantly for the future of the railroad was the work continued by their Geological office where the details were starting to come together for the line from Portage to Prince William Sound. By the end of the year a port location had been fixed and the area surveyed in order to ensure that the needed terminal facilities could be accommodated. Two routes into the port had been mapped, one with one very long tunnel and a good deal of rock work around Portage Glacier Lake, the other with two tunnels – the long one between Bear Valley and the port area and a shorter one between Bear Valley and the outlet of Portage Glacier Lake into the Portage River.

The last year of preparation, 1941, began for the ARR with a coal crisis. With the large, and growing, military presence in the territory the total production of all the mines operating along the railroad, whether on the north or south end, was unable to meet the demand for coal. ARR had long owned the mine at Eska but had put it into mothballs early in the depression era and had not yet brought it back to life. Very early in 1941 the mine was put back into production and new facilities were added to help boost the tonnage produced. Unfortunately, during the time that production was ramping up, the Army was forced to import some coal from the "states" although this embarrassment did not last long or stretch into 1942.

1941 also saw the railroad repurchase the Anchorage dock and restored it into serviceable condition using Army funds. However, stop-gap measures such as this could only go a limited distance in solving the supply chain capacity problem. A much larger scale, more comprehensive and permanent solution was needed and was finally begun in November of 1941 when the War Department allocated \$5.3 million to construct the new, 12.4 mile main line from Portage to the port site that had been surveyed

the previous year by the railroad at the head of Prince William Sound's Passage Canal. The routing option chosen by the military for the line was literally "Through the Mountains, Not Around Them". The more expensive but easier to operate and, importantly, more secure option was how the project would move forward with the result being the construction of the ARR's two longest tunnels<sup>8</sup>. The railroad's biggest, most technically challenging project since the original construction was underway. The 3.5 miles of tunnelling was "holed-through" in November 1942 and construction was completed in June of 1943.

The value of this line that was in having a "water level" route into Anchorage from the south versus the line over the Kenai Mountains. Near the end of the war, railroad management observed that the availability of the line into Whittier had allowed them to handle almost 75% more tonnage with the existing equipment than they could have done if their only route had been through Seward. This observation would play a major role after the war as to how the rehabilitation of the railroad would take place.

Less than a month after the "Whittier cut-off" project began, the nation was at war.

In 1942, the war became very real to Alaskans, particularly those involved with the railroad. By mid-year, the Japanese threat became very evident when, in June, they occupied Attu and Kiska Islands and bombed Dutch Harbor in the Aleutians. Military guards appeared on essential infrastructure such as the railroad's ports, bridges and tunnels and on trains carrying military supplies. Military Police controlled entry, whether by air or water into and out of the territory with such travel being managed by a permit system controlled by the Army. Travel to or from Alaska by aliens was strictly controlled and usually prohibited. Blackout requirements made train operations, particularly in winter, substantially more difficult and dangerous for the railroad.

For ARR, the darkest cloud on the horizon at this time was the developing labour shortage due to:

- The expansion of defense production in the "states" for both the U.S. military and U.S. allies,
- The amount of military construction going on in Alaska at the time, and
- The hundreds of railroad employees being drafted into the military.

This problem would not fully go away until well after the war. However, by the end of 1942 it became so acute that, even though tonnage handled and revenues climbed to record levels, the railroad's track, equipment and support structures began to deteriorate simply because the people needed to maintain them were no longer available. By 1943 the labour problem became so severe that the Army, at the request of The Alaska Railroad, dispatched the 714<sup>th</sup> Railway Operating Battalion north to help deal with the issue. This helped, but did not solve, the problem. Even with more than 1100 men in the battalion, the railroad would remain short of people needed to maintain and operate the property throughout the war. The Mechanical Department of the railroad, responsible for maintenance of all revenue producing and maintenance equipment, had particular difficulty in finding personnel. Their problems were not materially addressed with the arrival of the 714<sup>th</sup> since the battalion had very few individuals with the needed skills.

Part of the record tonnage was moving to points along the Yukon River. Much of this was for the Army and Army Air Force and was for the development of a series of runways and refuelling locations for

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<sup>8</sup> The hallmark of this 12-.4 mile long rail line would be the 2.5 mile Whittier tunnel and the 0.8 mile Portage tunnel. Whittier would remain only rail and water accessible for 57 years until a unique single-lane roadway was integrated into the Whittier rail tunnel. This project also included the building of a roadway along the mountainside edge of Portage Glacier Lake rather than a rail-highway solution for the Portage tunnel. This construction along the lake was one of the options proposed by the railroad's engineers 6 decades earlier.

military aircraft that were being built in the U.S. for the Soviet Union and that were moved to Siberia via Alaska. As mentioned earlier, these planes were flown by U.S. pilots from the “states” to Ladd Field, near Fairbanks and were then transferred to Russian pilots for the trip to Siberia. The flight range of these aircraft required the location of frequent refuelling stations and many of these were served by the ARR’s riverboats and barges. Most of the fuel for these remote locations moved in 55 gallon drums and photographs of the docks in Nenana at this time show immense stacks of these drums waiting to move to the forward airstrips. Cargos from Nenana included not just the fuel but also the supplies necessary to man these remote sites. To accomplish these movements the railroad needed additional river equipment. It obtained this equipment from the Yukon Navigation Company. The railroad eventually purchased the entire company including all of its floating equipment, oil tanks and buildings.

The war also seemed to make it obvious that a land route to Alaska would be a valuable asset. Although, by necessity, such a route would be much longer and travel across it would be much more time consuming than was a trip from Seattle to the Railbelt by sea, it was much more secure in a time of war, particularly when that war was being fought against an enemy with numerous, modern, long range naval assets that had a very realistic potential to threaten Alaska’s marine centric supply chain. The solution to this problem that the Army adopted was to construct the Alaska Highway from Dawson Creek, British Columbia to Delta, Alaska, about 100 miles southeast of Fairbanks, where it would connect with the existing Richardson Highway. Construction of the highway would proceed from three bases, all served directly by nearby railroads and all of which were remote from a major population or industrial center. These were Dawson Creek, Whitehorse in the Yukon Territory and Delta, Alaska by way of Fairbanks).

The three railroads closely involved in construction of the highway, Northern Alberta Railway at Dawson Creek, White Pass and Yukon at Whitehorse and The Alaska Railroad at Fairbanks would all be substantial beneficiaries during construction but White Pass would be the big long-term winner from the highway since its coming finally gave that company an efficient way to access the many non-ferrous metal mining and production projects that would take place in the Yukon over the next forty years.

The highway’s construction was authorized by the Army in February 1942 and actual construction began at Dawson Creek a month later. The route between Beaver Creek, Yukon and Dawson Creek came together in September 1942 and the Delta to Beaver Creek section was “complete” a month later. Work continued after “completion” to make the route useable by normal vehicles and this was finally accomplished in late 1943. Although the Alaska Highway has never provided serious competition to the water/rail routing of goods to Alaska and served very little military movement during the war, it did provide very large amounts of freight movement for the railroads involved during its construction (again, White Pass and Yukon was the biggest winner) and later, during and immediately after the war as it needed supplies for reconstruction of many sections.

By 1943, it had become very obvious that, even with the start-up of the Whittier Cut-Off, the railroad was in a situation where the demand for freight transportation was exceeding the capabilities of the freight equipment available to meet that demand. While, ideally, this would have meant acquisition of new, more modern equipment to solve the problem, time was simply not available to permit this luxury. Thus, ARR was once again forced into the acquisition of additional second hand freight cars. The result, when coupled with ARR’s existing fleet, was one of the most interesting, oldest and diverse car fleets in North America with equipment in almost every car type being a mixture of old and more recently acquired used freight cars that represented many of the thoughts about how freight cars from the teens and early twenties should be designed and built. It became, in fact, a rolling freight car museum. Fortunately, all of the new arrivals had steel frames and, in at least that sense, represented a technological advancement

for the railroad<sup>9</sup>. New freight cars acquired during the war included 20 insulated, heater equipped box cars, 97 regular box cars, 20 refrigerator cars<sup>10</sup>, 132 flat cars, 24 hopper cars and 70 drop-bottom gondolas. Almost all of these cars had a capacity of 50 tons making them even more useful than their lighter weight predecessors but also harder on the increasingly fragile infrastructure.

The railroad's traffic growth during the 1938-1945 period also made obvious the need for additional motive power both for the traffic increases and, just as importantly, to replace the long obsolete locomotives acquired from Panama.

The first arrival was in 1942 and was another used locomotive, number 751, a 2-8-2 purchased from Northern Pacific Railroad. It was part of a locomotive class built between 1904 and 1907 and was thus, one of the oldest 2-8-2s in existence.

Secondly, two small, new 2-8-0s, 501 and 502 (Eventually renumbered 401 and 402) arrived mid-year from Lima Locomotive Works. These engines were built for the U.S. Army based on engines designed for and used on military railways during World War I. Four more of these engines would come to the railroad in 1947. These light weight locomotives with very small, 50", drivers proved to be very useful power for trains on the Seward - Portage portion of the railroad and, shortly after the war were one of only two classes of locomotives allowed on that line due to the degree of its deterioration.

The final new arrival, in 1942, was a second 4-8-2, number 802. It was built by Baldwin to the same specifications as 801 had been several years earlier.

In 1943, another used Northern Pacific 2-8-2, number 752 arrived. Like 751, it was a member of a very old class of locomotives.

Also that year, 6 new U.S. Army 2-8-0s arrived and were numbered 551 - 556. The next year, an additional 6 of these engines, numbers 557 - 562 would arrive. These locomotives were the Army's standard World War II power and before the war ended, engines similar to the 550 series would see use all over the world. With over 2500 engines built to this design they would be the largest class of steam locomotives ever built to a single design in the U.S.

The last Army specification locomotives to arrive were ten 0-6-0 switch engines that were not put into service until 1946 and 1947. They had a very short service life with most of their use being on work trains during the post war rehabilitation of the railroad. By 1952, some were already in the scrap line waiting for their remains to be shipped back to the states. However, at least one, managed to hide-out in Whittier from 1952 through 1954. Although only very infrequently used as a switch engine, it did do some useful work during the winters when it would be fired up to help clean out track switches after major snow or wind storms, a not infrequent occurrence in Whittier. By 1954, it too had been sold for scrap.

Finally, in 1945, the last truly Alaska Railroad steam engine, number 902, a 4-6-2 built to the same specifications as 901, arrived for service. Both of these engines were beautifully proportioned and were fine performers both in the passenger service they were built for and with freight trains. They had terribly short lives, were out of service by 1952 and by 1954 and were part of a dead line of steam

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<sup>9</sup> Even at the end of World War II, 420 out of the 980 railroad owned, active, revenue freight cars (43%) had wooden, truss rod supported underframes. Most, but not all, of these cars were either Panama flat cars or cars that had been converted to other car types that were originally Panama flat cars.

<sup>10</sup> At that time, all refrigerator cars on The Alaska Railroad were designed to accommodate heater units in the winter. See Special Instructions No. 3, In effect 12:01 am Sunday, July 18, 1948, pages 40-43.

locomotives in Whittier awaiting shipment to Spain where, sadly, it is believed they were never operated.

In 1944, the most important locomotive addition of the war took place with the arrival of two American Locomotive Company RS-1 diesels needed to help deal with smoke problems that the railroad was having in the two long Whittier Cut-Off tunnels. These two road switchers were the beginning of the ARR conversion from steam to diesel power and, as such, one of them is preserved today at the Alaska Transportation Museum north of Wasilla. Not only did these two solve most of the smoke problems in Whittier they also proved to be more reliable and more economical performers than were their steam counterparts. In the years immediately after the war, they would be followed by 36 similar diesels that would become the foundation of the railroad's operations by 1952. 1000 and 1001 remained the primary power for the passenger trains into and out of Whittier until 1960 when newer power pushed them into yard service in Anchorage.

The need for new, additional passenger equipment during the war, was not as pressing as the requirements for freight. This was the result of the changes in passenger composition due to the war. Prior to the military build-up and the travel restrictions, the ARR passenger fleet was based on the needs of local travellers plus the summer tourist trade. The war travel restrictions eliminated the seasonal tourist trade but brought about a large increase in military travel, particularly for military personnel on leave, a year round occurrence. Thus, the extra cars kept on hand by the railroad for the summer tourist traffic were now used throughout the year and, for the most part, provided sufficient capacity particularly when aided by a few Army troop sleepers that were brought north. Even when the civilian travel restrictions began to ease up a bit, there was still sufficient capacity to handle most situations.

In early 1945, the Army decided to cease operations in Whittier and concentrate military port activities around the Army Dock in Seward with The Alaska Railroad taking over the operation of the facilities in Whittier. This arrangement lasted until December of 1945 when the Army once again changed its mind and moved 1400 personnel back into Whittier and resumed operation of the port while, at the same time, transferring the Army Dock in Seward to the railroad. The stage was now set for the Army to develop permanent facilities in Whittier that could support the logistical requirements of the planned expansion of military facilities throughout the Railbelt region. The result would be an expansion of the Whittier facilities to accommodate a significantly larger number of military personnel and also, provisions for their dependents, their civilian support personnel and their dependents, the contractors required for many special projects and the railroad employees required to support an increased flow of military cargo. All of this would lead to the need to create something much more than the type of temporary, forward military facility that had sufficed during the war. Rather, it would now require something closer to the permanence of a full scale military post capable of supporting a population of about 2500 people. In short, creating a real town where, in 1945, there were only very temporary, very basic structures that provided the minimum in creature comforts.

The Army's change in directions also influenced the position of the railroad. Prior to this decision, it had been counting on converting Whittier, after the war, into a commercial port to which it could move the operations of all its steamship connections. It would then be in a position where it could abandon the line to Seward. This would influence its thinking even after the Army made the decision to make Whittier its permanent home. Both events and politics would eventually make the railroad's objective unattainable. However, it would take until 1953 before the issue would finally be temporarily settled. It would not be until December 1984 when the coal export terminal opened in Seward that this matter would be absolutely and finally put to bed.

However, there was a much more immediate problem that needed resolution before any of the other issues mattered. The real bottom line was that, by 1945, The Alaska Railroad was in deplorable condition

both in terms of infrastructure, equipment and also, personnel. Most of the first two problems were caused by the third, lack of people to operate and maintain the property. While the end of the war might provide some relief since more manpower might be potentially available, it would also make it more difficult to finance the work needed to upgrade the property to support the economy that had developed during the war and that was likely to expand greatly after the war. In any case, the requirements of the railroad, if it was to efficiently and effectively compete for a place in that expansion, were far too great for it to even consider financing solutions out of ongoing revenue. The reality was that the price for having never fully “completed” the railroad had finally overtaken the railroad’s ability to keep making marginal annual improvements. The demands of World War II had finally and fully exposed the fragility of the railroad. It was clear that the post-war military demands alone would collapse the railroad unless action was taken. It had reached the point where a decision had to be made about The Alaska Railroad’s future and that decision was quite literally –

“...to be, or not to be, that is the question...”.

### **3.b) Rehabilitation**

The Alaska Railroad was in deep distress and, unfortunately, as 1946 began, there was not yet a clear path forward. Colonel Ohlson had retired at the end of 1945 and a new General Manager, Colonel John P. Johnson had taken over the leadership of the railroad at the beginning of 1946. Prior to coming to the railroad, he had been the officer in charge of the Army’s wartime railway operations in Iran. Colonel Johnson had spent the months prior to his ascent into the General Manager’s position doing a thorough analysis of the railroad, its problems, opportunities and what needed to happen to solve the former and provide a pathway toward the latter. His conclusion after this examination had been stark – either fully rehabilitate the railroad in all aspects, not just its physical property, so that it could move forward as a largely self-supporting, going concern, or, abandon it. By the first month of 1946, he had developed a strategy that he felt would deal with the railroad’s issues. However, it would be complex to execute and would require an extended commitment, not just of the railroad, but also the Federal Government. It would also be expensive.

The plan recognized the need to modernise both the railroad’s infrastructure and equipment as well as reorganizing its management structure to provide the leadership and accountability needed to pull off a very large project and, over the long run, to effectively manage a complex business.. Additionally, it recognized the need to change the railroad’s commercial relationships in a manner that recognized, going forward, that it would have to become a business entity that survived on the basis of its ability to compete in the markets it served, rather than be a territorial economic development tool that could fall back on the Federal Treasury if times became difficult. It also recognized that all of this could only happen with the clear and unwavering support of the railroad’s ultimate leader, the Secretary of the Interior.

Thus, Johnson’s first goal was to gain this support. To do this, the railroad would need to help the Interior Department put together a strategy that could be sold to the ultimate party that would determine whether the plan would be implemented – the congressional committee that would set the department’s budget. He also realized that to do this, the plan must also be one that would be endorsed by the territory’s non-voting congressional representatives. Getting all this done would only happen if the railroad’s plan could be proposed by a knowledgeable, but independent source that could look at what needed to be accomplished to make the railroad self-sustaining and then provide the documentation that would make the plan saleable upward.

In February of 1946 the Secretary of the Interior appointed a committee to “Review the Rates and Policies of The Alaska Railroad”. After appointment, this committee spent the rest of the first half of 1946 in a in a very detailed review of the railroad’s physical plant, traffic, economics, future business prospects

tariffs and rates, and financial structure along with its administrative and operating policies and processes. They also brought in experts to provide detailed analysis of issues that needed to be addressed and conducted public hearings in Seattle, Seward, Anchorage and Fairbanks. They then spent most of the rest of 1946 discussing details of their findings and the recommendations derived from those findings and documenting those findings and recommendations in 134 pages of text along with 51 pages of tables and charts that provided, in graphic detail, a look at the railroad's problems, failures, successes and opportunities as well the difficulties and extreme risk caused by its fragile physical plant.

All of this led to twenty-two recommendations for changes that could provide an opportunity for the railroad to operate as an ongoing business concern. While a number of these recommendations pertained to pricing and tariff policy and strategy, many others were directed at operational or management practices or issues that would help focus the railroad on its primary mission as an efficient transportation entity.

Among the most important of the committee's recommendations were these four:

- “The committee recommends that a complete program of physical rehabilitation of the railroad and its equipment, designed to effect the maximum savings in maintenance and operating expenses and to enable the railroad to render adequate service, be adopted by the Department and strongly presented for Congressional approval.” It then went on to indicate that the cost of such a program would involve “...approximately 15 million dollars-worth of surplus equipment... authorized last spring when Congress passed a law permitting the transfer of surplus property to The Alaska Railroad without cost..” The committee also concluded that the work to modernize the railroad's physical plant would “...call for an expenditure of 34 million dollars over the next five year period.” This was the first, and what would become the most important of the committee's recommendations. It supported the basic conclusion that Colonel Johnston had reached in his assessment of the property and, although it did not explicitly endorse abandonment if the rehabilitation and process changes were not made, the supporting text of the report strongly implied that not fixing the problems would perpetuate indefinitely an untenable situation. In actual fact, the railroad had already begun to put many of the changes, particularly those that did not require significant outside funding, into place. These included the surplus equipment that the railroad would acquire mostly from the military which had, for the most part, already been selected and was either already on the way to Alaska or was in the process of being modified for its intended service in Alaska. The dollar amounts in the recommendation were based almost entirely on the railroad's estimates. In reality, the actual rehabilitation would take much longer and be much more through than what had been originally envisioned and the costs would be close to double the amount proposed by the committee.
- “The committee recommends that the operation of the line between Seward and Portage be abandoned forthwith and that all port operations be transferred to Whittier.” While the railroad eagerly agreed with this recommendation, political and physical reality never came together to make such an abandonment practical. While the Portage-Seward main line has often lived a precarious life over the last seventy years, it is still with us; sometimes because of politics but more often, because of events that have made it a necessary part of the railroad's operations. The first of the events to cause Seward to remain important to the railroad had already happened by the time this recommendation had been written – the Army's decision to make Whittier their primary Alaska port. More would follow including the recognition that the available physical space in Whittier simply would not provide room for both military and commercial facilities for either needed port infrastructure or supporting civil infrastructure. In 1953 it would also become apparent that a backup facility for Whittier would be important when

the Army dock in Whittier burned down and the military was forced to quickly move operations to Seward pending positioning and placement of a temporary “DeLong” dock<sup>11</sup> in Whittier to serve while a permanent facility was built.

- “The committee recommends that passenger service on the rivers be discontinued and that the large expensive steamers be retired.” This was the first of several recommendations that suggested that it was time for the railroad to remove itself from many of the ancillary services that it had been offering as a part of its role as a development tool. Others included removing itself from the hotel business in Curry and McKinley Park, getting rid of various mess houses and employee boarding facilities and disposing of the Eska coal mine after the railroad finished its conversion to diesel operation. In addition to the types of operations mentioned by the committee, the railroad would, during the rehabilitation period, also hand over to others the operation of local electric power plants and housing projects, such as Government Hill in Anchorage, that it had developed to assist new employees in finding a place to live.
- “The committee recommends that the administrative and operating organization of the railroad be extensively reorganized in accordance with its increased scope and volume of business.” The committee then goes on to suggest structural changes in the management that would bring the railroad in line with other Class I railroads of the time. They also suggest that accounting practices be revised to reflect those of the railroad industry instead those of the Federal Government. This set of changes implied a path forward that would be a complete break with many of the roles played by the railroad in the past. They effectively provided the structure that would administer The Alaska Railroad as more of an ongoing business entity rather than its past role as a government agency. It would take another forty years and a change in ownership to fully make the transition to this structure, however, this essential first step was where it all began.

The bottom line for all of these recommendations, including those related to management of pricing policy was that it was basically time for the railroad to be a railroad rather than a welfare and governmental development agency. For the first time, it suggested, on behalf of the Federal Government, that it was time to move beyond the initial charter of The Alaska Railroad and have its business model reflect the need for efficiency and effectiveness of operation as primary goals along with a recognition that the territory’s economy was beginning to develop to a point where it should no longer require subsidization by the railroad. This was the basis of the plan that Johnson had proposed . The fundamentals of his plan were that the Federal Government should finish the job it had started back in 1914 with implementation of the rehabilitation, restructuring and reorganization programs. This would finally allow the railroad to actually be “completed”. The payoff for the government would be a railroad that could take care of itself under normal circumstances.

The Interior Department had the plan it needed to sell the rehabilitation concept to Congress and their upcoming budget proposal reflected that plan, Alaska’s Territorial Delegates had also bought into the plan, and finally, Congress agreed that the plan made sense particularly given the emerging Cold War defense imperatives looming on Alaska’s horizon. With Congressional approval, there was a clear path forward toward a better, long term future for the railroad.

The next twelve years would produce a dramatically changed Alaska Railroad.

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<sup>11</sup> A DeLong dock was a type of portable port facility developed during World War II to support rapid resupply of troops involved in beach landing operations and to provide immediate relief where permanent port facilities had been destroyed.. Designed to be temporary, the Whittier facility remains in place today seventy years after its initial installation.

Officially, the rehabilitation era of The Alaska Railroad began in 1947 with the passage of the 1947-1948 budget by Congress. Officially, it ended in 1953 with the completion of the rebuilding of the main line from Portage to Fairbanks. Both dates are wrong.

In reality, the rehabilitation would begin in 1945 when discussions between the railroad and the Army began concerning access by the railroad to the large fleet of rail equipment acquired by the Army during the war and that now was mostly unneeded. The real end would finally arrive in late 1958 after the reconstruction of the line between Portage and Seward was completed and a new Seward yard along with two new docks were in place. In reviewing the rehabilitation, it is best to start at the real beginning, not the official one. Some of the more critical steps in the rehabilitation program were as follows:

- Locomotives – As mentioned earlier, the performance of the Alco RS-1s in service between Whittier and Anchorage had made the case for dieselization as quickly as possible. Negotiation began with the Army in 1945 to obtain at least twenty, six-axle versions of the RS-1s in the form of RSD-1s that were being returned to the US from Iran and were surplus to the needs of the Army. Ultimately, twenty-eight locomotives of this type would be transferred in the initial 1947 transaction with another eight following in 1950-1951. With the two original RS-1 engines, this would give the railroad thirty-eight RS-1 or RS-1 derivative locomotives allowing most of the operations on the railroad. to be dieselized. Eight of these would be returned to the Army in 1956<sup>12</sup> after nine new F-7s and three new FP-7s from EMD had been placed into service.

Of the remaining twenty-eight six axle RSD-1s, seventeen would be converted to “streamlined” carbody, four axle locomotives (eight “A” units and nine “B” units), five were converted to four axle locomotives but left in their road switcher configuration, essentially becoming RS-1s, and the remaining six lived out their lives as six axle RSD-1s. Many of the four axle locomotives would stay with the railroad until the early 1970s, however, most of the six axle versions would be gone by the early 1960s due to the numerous problems caused by their long wheelbase trucks and light axle loads.

The first two of the carbody units 1050 and 1051 represented some of the ugliest “streamlined” locomotives ever built. These two early conversions were being brought onto the railroad in order to power a train that would launch a new thrice-weekly passenger service between Anchorage and Fairbanks. The trains, #6 northbound and #5 southbound would be the first edition of a train, The AuRoRa that would eventually offer daily service on the route. This early version of AuRoRa would utilize equipment that was made up of passenger cars coming mostly from the Bureau of Mines, a sister Department of Interior agency. In fact, everything about this particular train was made up of modified older equipment with the passenger cars being former heavyweight, standard steel equipment that had smooth sides and roofs added.

Effectively, for The Alaska Railroad the 38 RS-1/RSD-1 locomotives permitted the railroad to dieselize most of its operations at basically the cost of shipping the locomotives from the states to Alaska plus the cost of the modifications to the engines. In short, at perhaps the lowest cost per unit in the rail industry. It became a key element in the modernization of the railroad from an underperforming, early twentieth century property into a main-stream, mid-twentieth century small Class I railroad and one that was finally structured to grow rather than to fail.

The nine new F-7s mentioned earlier would be a turning point for the railroad in that it would begin a preference for EMD built locomotives that lasts into the present. The F-7s were consistent, reliable first class performers that would be around for almost forty years into the

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<sup>12</sup> One of these eight, ARR number 1034, would be preserved and is on display at the U.S. Army Transportation Corps museum at Fort Eustis, Virginia

future and even at thirty-five would be regularly powering the Anchorage-Fairbanks passenger trains and easily making much more demanding schedules than were asked of them in the 1950s when they were new. ARR would like them so much that in late 1960s, they would acquire six additional used locomotives from Great Northern (2 "A" Units and 4 "B" units) and twelve from Denver & Rio Grande Western (7 "A" units and 5 "B" units). Of the original twelve F-7/FP-7 units, nine would leave Alaska in the late 1980, all in operating condition when they left and with several still operating today on short lines or tourist railroads. Now seventy years old, their current condition says a lot about both the quality of the original product as well as the quality of the care they received over their lifetimes in Alaska.

- With the flood of war surplus Alco road switchers, two Alco S-2 and two Alco S-4 switchers<sup>13</sup> , four EMD SW-1 switchers, nine EMD F-7s and 3 FP-7s, most of the steamers were vanquished by 1954. A few hung on until 1958. And one, now famous, locomotive number 557 was retained until 1963 to help navigate trains through the frequent spring floods that happened in Nenana when ice jams could block up the Tanana river. Steam was relatively short-lived on the Alaska Railroad lasting only thirty-five very tough years. Steam never represented the glory years on the Alaska Railroad. Most of the steamers used on the Alaska Railroad were second hand acquisitions to help a struggling railroad try to get established. However, regardless of their age or suitability for Alaska conditions, they did the job when it had to be done. Ultimately, that's what counts!
- Passenger Cars – The initial AuRoRa although the first ARR equipment to be painted blue and yellow, was simply a placeholder until permanent equipment could be procured from the Army's surplus hospital car inventory, converted to meet commercial requirements and put into service. The second, and permanent version of the AuRoRa gradually replaced the older equipment in 1949 and 1950. The twenty-eight hospital car conversions, which produced some of the most comfortable riding passenger cars operating anywhere in North America, were done by Puget Sound Bridge and Dredging in Seattle. They involved rebuilding the original cars into a number of different car types including eleven tourist coaches, eight coaches for local service, three combination coach-baggage cars, two diners and six baggage and mail cars.

Soon after sufficient replacement cars had arrived to serve both the Anchorage-Fairbanks and Anchorage-Whittier service, both the locomotives and the passenger cars in the earlier AuRoRa along with a number of ex-troop sleepers were cascaded into troop train service out of Whittier to Anchorage and Fairbanks . These troop trains would make a regular appearance up until 1960. During the late 1940s and all of the 1950s most military personnel came to and went from Alaska on troop ships operated or chartered by the Navy and most went from the ship to their posting in Alaska on troop trains operated by the railroad.<sup>14</sup> All of this equipment would continue in service until replaced by passenger cars bought from Union Pacific after the 1971 creation of Amtrak made them surplus to UP's needs

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<sup>13</sup> The four Alco switch engines began service on ARR in 1955 as part of an agreement between the Army and the railroad. The railroad would take over all switching required for the military at Fort Richardson and Elmendorf Air Force Base outside Anchorage and, in turn, the railroad would be given the use of the four Army switch engines without charge. It is unclear as to whether the railroad ever received title to these locomotives even though it used them until they were retired and made available for scrapping.

<sup>14</sup> The family of the wife of one of this article's authors moved to Alaska in 1953 on an Alaska Steamship Company vessel chartered by the military which landed her and her family in Seward. The family briefly returned to the states in 1957 on a troop ship operating out of Whittier.

- Freight Equipment- In addition to locomotives and former hospital cars, the Alaska Railroad was the recipient of almost 1000 former Army troop kitchen and troop sleeper cars, along with several hundred DRGW gondolas that had been financed by the military.

The troop kitchen and sleeper cars were everywhere. Since these cars were originally derived from a boxcar design built for the Pennsylvania Railroad it was a reasonably straightforward task to make them back into boxcars with the biggest part of the job being the conversion of their braking system from one for passenger service to one for freight. Otherwise, it was just a matter of filling a few holes in the sides, getting rid of the end doors, installing freight side doors, planking the floor and putting the appropriate safety features on the outside of the body. A few became power cars for the passenger and work trains and, in the 1950s, for the refrigerated containers on freight and mixed trains. Several were converted into work train and snow fleet cabooses and crew cars. About 100 were deployed as kitchen, bunk, foreman, tool and maintenance -of-way supply cars for maintenance of way gangs, thus remaining in essentially the same role they had played while in Army service. But most of them were converted into one form or another of boxcar. This included insulated box cars, refrigerated/heated boxcars, regular boxcars, double door boxcars, and some years later, a few were converted to high cube boxcars by welding the top of one car onto the main body of another car. Later also, about twenty were converted to flatcars without decks that were designed to handle two 24' containers. These were the least successful of the conversions as it was found that, without a car body, the cars could not even support the thirty-five tons of weight represented by the two loaded containers.

Some of the gondolas would have their sides cut down to about one foot in height, would receive trailer support structures and become the first intermodal equipment on ARR. Their principal use would be out of Seward handling trailers coming off of barges from Seattle. The rest of the gondolas were relatively lightly used for the first two decades that they were in Alaska. However, they came into their own in the 1970s and 1980s during the development and expansion of Prudhoe Bay and adjacent oil fields when they hauled tens of thousands of high value carloads of pipe and fittings, structural materials and a variety of other oil field equipment and accessories.

These boxcars and gondolas were ubiquitous until the 1980's and many of the boxcars retained their unique Allied Full Cushion, passenger style, friction bearing trucks for their entire lives although some were refitted in 1963 with Bettendorf trucks so that they could legally operate on railroads in the Continental U.S.

Finally, in 1949, the railroad received 20 modern cabooses from Pacific Car and Foundry, a descendent of the same company that had built The Alaska Railroad's original cabooses back in 1916. Shortly afterwards, the first group of 3-Bay, 70 ton capacity hopper cars were also added. They were the first of an entire series of similar cars that would come to the railroad during the 1950s and, going forward, would be the backbone of the coal fleet until the mid 1980s when their first replacements, 100 ton capacity, 4-bay hoppers, would be introduced to the railroad.

- Infrastructure / Mainlines - The Alaska Railroad's mainline infrastructure was woefully ill-equipped for the rapid onslaught of war traffic. The rail in the track was still the original, light duty 70 pound material which was even considered very light duty rail at the time of construction. At the time the railroad was being built most main lines of similar railroads in the continental U.S. had already either installed or were installing 90 pound rail in their main lines and 70 pound was being relegated to their yards and industrial tracks. The ARR's rail had been beaten down by the war, by the heavier freight equipment and larger locomotives that the railroad was acquiring. It was poorly supported on worn out, untreated wooden cross ties that

were also of inadequate size for the current equipment and also being damaged by the poor quality of the sub-grade and ballast material on which the track had been built. Additionally, many of the bridges along the route were deteriorating, untreated wooden structures that were also having difficulties with the increasing weight of the equipment they were handling. It was all evidence that the “completed” railroad that had never actually been completed and that the volume of war business had finally outrun all of the half-measures that had to be used to keep things moving since “completion”. In 1947, funding was secured to begin a \$75 million, five-year rehabilitation project that would completely rebuild the main line between Portage and Fairbanks by 1952. Included in this rebuilding project would be both track and roadway structures such as the bridges.

By 1952, this had all changed dramatically. The worst of the sub-grade of the railroad had been corrected and, while there were still problem areas, there were plans and resources now set aside to continue upgrading over the coming years. Treated, larger cross ties were installed along with larger tie plates<sup>15</sup> that helped spread the weight that could be supported by the new 115 pound rail that was now the mainline standard. Many of the wooden mainline bridges were replaced by steel structures, others were replaced by culverts and those that remained received, for the first time, heavier duty structural material that had been treated to dramatically slow deterioration.

Line relocations not only reduced the miles of main line but also upgraded the quality of that which remained. The largest of these projects and the one that had the most immediate impact was the reconstruction of the line between Potter and Indian. The Territory was interested in building a highway south from Anchorage to link with roads coming north from Seward and the western part of the Kenai Peninsula but there was no practical way to build a road along the cliffs above Turnagain Arm. However, the railroad could be relocated further out into the water leaving a right-of-way for the highway on the former rail bed. The railroad saw this as an opportunity to build a line with far less curvature by not following the terrain as closely. The result was twelve miles of new railroad that had the equivalent of three entire circles of curvature removed from the line and with a speed limit on the new track of 40 or 45 miles per hour for all except one curve at Rainbow versus 25 mph on the railroad’s original mainline.

In all, just over 400 miles of the railroad had been upgraded to the new standards by 1952. The impact of this work could be easily seen in new operating efficiencies. Passenger schedules between Anchorage and Fairbanks were reduced to twelve hours versus over a day under prior timetables. The need for the Curry hotel to provide overnight space for train and engine crew disappeared almost completely since the passenger crews could run through to Fairbanks without need for relief and the freight trains could consistently make it the entire distance between Anchorage and Healy in 12 hours or less. The path was now clear for the eventual elimination of the Healy Subdivision and its consolidation with the Anchorage Subdivision in 1955. The Fairbanks-Healy local trains that handled Suntrana coal could make a round trip in a day instead of two. Maintenance of way expenses plummeted making it possible to maintain the track in far better condition with fewer people than were necessary before the rehabilitation. The ability to handle fewer carloads to move the same volume was also now possible with the most obvious example being the ability to use the seventy ton capacity hopper cars on the north end of the railroad to move the coal business to Fairbanks. In summary, The Alaska Railroad was finally in condition to begin operating in the same manner as most contemporary railroads of its size throughout North America, were operating. In fact, it had now

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<sup>15</sup> In some locations it was not a case of replacing tie plates but of installing them for the first time.

forged ahead of many of the smaller Class I railroads of that era, particularly many of those in the North Eastern U.S.

This left the only remaining unresolved question as what the fate would be for the Seward-Portage mainline. In a sense, that question had already been at least partially answered with the opening, in 1951, of the new line that eliminated the original "Loop District" about 10 miles south of Portage. This one-million dollar project, which eliminated the wooden trestles, snowsheds and a tunnel; more than an entire circle of curvature and 1.1 miles of mainline, would not have been undertaken if the railroad had any hope that it would be able to abandon the Seward line. Knowing that it could not abandon the line, it tried one last time to avoid the additional work of giving it a significant upgrade but to no avail. The Whittier dock fire in 1953 solidified the belief, particularly that of the military, that an alternate port needed to be available. At the same time, Alaska Steamship was starting up container service on its converted World War II Liberty ships and would need a docking facility that could efficiently handle containers between the ships and railcars. With the military expanding their presence in space constrained Whittier, that alternative was out of the question. Finally, petroleum fuels from refineries in the states were beginning to move in large quantities through Seward to supply the entire Railbelt. Regular movements of this type did not need to be moving on trackage of 1916 era quality. Thus, the mainline rehabilitation program would need to be extended another five years in order to rebuild the Seward main line. With the military's endorsement, the money to do the work was requested from Congress, was approved and the deal was done. Seward would remain a part of the Railbelt – for now.

- Infrastructure / Terminals – A railroad with a high quality main line is of little value if its terminals cannot efficiently dispatch, receive and support train operations, provide necessary repairs and service for equipment and provide the facilities to manage and support the people needed to execute the railroad's service plan. In 1946, this was something that The Alaska Railroad did not have due to its growing and changing business and its completely restructured equipment asset base. All of this would make it more difficult to operate enough trains with sufficient capacity to meet customer expectations. ARR also needed to improve the terminal infrastructure simply to adapt the terminals to the type and quantities of trains it needed to operate as it moved forward. Each of the ARR terminals needed different levels and types of changes and it is useful to look at each individually.

Anchorage was the most complex terminal and would need the most change in order to perform well in the anticipated future environment. As it existed in 1946, and because of the increasing length and number of cars being handled on freight trains, its yard tracks were shorter than were needed to build trains that did not have to be doubled over before departure. The switching leads on both ends of the yard were short, meaning that the main line was often blocked and the yard had no arrival and departure tracks that did not interfere with freight car classification activities. It also had a problem in that all freight trains departing to the south had to operate through the passenger station and likewise, all of the northbound passenger trains needed to operate through the freight yard. Thus, it could frequently cost trains considerable time just to get out of the terminal. This problem was expected to increase as business grew. The shops in Anchorage were not equipped to efficiently repair or service diesel locomotives and there were not sufficient car repair and servicing facilities to handle either the needed freight car repairs or modifications or the servicing of the new passenger car fleet, particularly in winter. Staff reorganization had brought together all of the management groups previously scattered throughout Anchorage into the general offices thus requiring more space than was available in the new General Office and Depot Building provided even though it had just opened in 1942.

To solve one of the problems, six new arrival-departure tracks were built, one of which also served as the north end switching lead for the existing yard and all of which were served by a long north end lead track that could itself hold an entire train of that era. The conflicting arrival and departure problems were solved by extending the existing mainline in front of the passenger depot almost three miles to the north end of the new freight switching leads so that passenger trains to and from the north were separated completely from the freight movements<sup>16</sup>. Likewise, to eliminate the conflicts between southbound freight trains and passenger trains in the station, an extension to the existing main line through the freight yard was constructed to connect with the main line to the Portage about a quarter mile south of the passenger station. This required a new bridge across Ship Creek.

An entirely new shop complex was constructed in Anchorage. The new diesel engine house utilized a building that had originally been constructed for the military in Denver, Colorado as a munitions factory. The new car shop, coach shed, heavy repair shop and machine shop were all constructed with buildings that were similar in design to the new diesel engine house. Because of the remoteness of Alaska, these shops have always been very comprehensive for a railroad the size of the Alaska Railroad and capable of doing just about any repairs or customization needed for ARR equipment to survive and thrive in a very harsh operating environment. An indication of the success of this comprehensive equipment repair and service facility is that it continues in operation to the present day, seventy years after it went into service. Clearly, the internal equipment has been updated many times. However, the basic mission and effectiveness of the facility remains unchanged.

Finally, the general office building was expanded with additional wings on the building. It operated successfully until the mid 1990s when a new headquarters building was built across the passenger mainline from the original structure. The original building remained in service as the passenger depot and as rental office space while the additional track and platform space was eventually added to accommodate the growing summer passenger demand.

Fairbanks had a different problem in that the entire yard was much too small to deal with the growing military and civilian freight and passenger traffic. An entirely new terminal was necessary for this location. A new, very efficient freight yard was constructed that was linked to a new maintenance and service area that included a new engine house with full locomotive servicing capabilities, a car shop and coach shed, a power plant, a new freight house and facilities to transfer freight between railcars and trucks, a new yard office and a new depot. When completed, the terminal, as a whole, was probably the most efficient location on the railroad.

Healy, at that time was not accessible by road and an entire self-sufficient railroad community was needed in that location. A new depot with living quarters for the agent was built, along with a new railroad hotel and bunk house for single employees. There were also provisions for a postal facility and a small school. Additionally, quarters were built to accommodate employees with families. A new diesel engine house was constructed after the existing steam facility burned down in 1952. It also included servicing facilities for the two locomotives that were stationed there to switch the local yard and serve the coal loading facility on the Suntrana branch.

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<sup>16</sup> This line truly became essential in the early 1980s when 8 to 16 daily loaded or empty gravel trains needed to pass through the Anchorage yard without stopping or only stopping to change crews. It was only possible to operate these trains on the required schedules because of the ability to bypass the freight yard by using the passenger mainline.

Finally, as a part of the rehabilitation of the Seward–Portage line, a completely new yard was built in Seward that was designed to efficiently serve two principal purposes – serving the two new docks that handled the containers coming off the steamships and barges and handling the tank cars of fuel for Standard Oil and Texaco that came off company tankers at the oil dock and were destined for the civilian consumers in Portage, Anchorage, the Matanuska-Susitna Valley, Healy-Suntrana, Nenana (and Yukon/Tanana River points) and Fairbanks. Additionally two new docks were built to serve the container traffic and a new engine house was installed.

Other events in the rehabilitation era included -

To celebrate the initial “completion” of this epic post-war rehabilitation project the railroad dedicated a monument in Anchorage on November 17, 1952 at the depot/headquarters building using 0-4-0 saddle tank locomotive number 1 which had been used in the inauguration of the AuRoRa five years prior as the main icon for the monument.

In 1952 Alaska’s first flashing crossing lights were installed at the entrance to Elmendorf Air Force Base. A decade later the first flashing crossing signals with gates in Alaska were installed on ‘C’ street in Anchorage.

In 1953 two new diesel powered tug boats entered service on the Tanana and Yukon rivers out of Nenana. They replaced the older steam powered sternwheelers. The Nenana was the last of these classic vessels and was transferred to Fairbanks in 1957 where it has been a center piece of Pioneer Park, along with vestiges of the original Tanana Valley narrow gauge. The Yukon and Tanana River barge operations were contracted out to Yutana Barge lines in 1955, further focusing the Alaska Railroad on the rail network.

The Alaska Steamship Company quit operating passenger service to Seward in October 1954. It would be almost another forty years before regular passenger service returned to the railroad’s Seward dock in the form of the cruise ships that would become a major component of the Alaska tourism scene and the railroad’s passenger revenue.

In 1955 some sleeping cars were acquired and a new overnight, three times a week winter train the ‘Midnight Sun’ was inaugurated. But this train was short lived, lasting for only four winter seasons. However, two of the sleeping cars would live on at the McKinley Park Station Hotel which was built after the original park hotel burned down in 1972. These cars were moved to Nenana after the hotel in Denali Park was razed and one may still survive there.

In 1956 the Anchorage freight house began deliveries within 12 miles of the freight house. The railroad also started piggyback service between Anchorage and Fairbanks. The Parks highway was not yet open and the truck route from Anchorage to Fairbanks was via the Richardson highway and was considerably longer than the more direct route offered by the Parks Highway today.

In 1957, as the cold war with the Soviet Union started up, the military bases in Alaska were the closest to Russia and took on a new prominence. Work started on a new military base, the Clear Air Force station with highly advance radar systems as part of the US military’s Defense Early Warning network (DEW line) to detect aircraft and ballistic missiles targeted at the United States and Canada. The shortest path for such assaults would be over the arctic. Clear Air Force Station (now called the Clear Space Force Station) became another recipient of coal to fire the power plant built on base. The construction of the base required a seven mile long relocation of the railroad around the base area. This was done with modern construction techniques

providing a really solid subgrade, and became one of the fastest stretches on the Alaska Railroad.

In 1958 a modern microwave system replaced wire communications on the Alaska Railroad.

And thus, the rehabilitation era of The Alaska Railroad came to an end. It represented a time of change that is, to date, the most dramatic in the railroad's history and was critical if the organization was to have a future. First, and foremost, the rehabilitation finally produced a fully operational, working railroad. It changed the "railroad" into a railroad and moved it far down the path toward eliminating its social services role in the Alaska economy. Going forward, it could focus on building the freight and passenger business for itself and for its customers and would be able to adapt its operations and objectives to deal with the inevitable economic changes of the Alaska economy without being tied to as many ancillary objectives as it had faced in the past. It would be a part of the economy rather than being the agent that was trying to create the territorial economy. Going forward, there would be mistakes and setbacks along with the celebrations of success, however, it finally had the resources to respond to change and to positively help create opportunities.

### **3.c) The Changing Environment – Ten Years of Adaptation**

After spending twelve years remaking itself in order to be able to more readily adapt to future conditions, the railroad would next be faced with a decade in which it would face both physical and economic situations that would require it to use its newly acquired skills both to adapt to a changing Alaska economy and to deal with the physical destruction of a good portion of some of the most critical sections of its infrastructure. In short, it would have to put its recently learned change skills through a very tough graduate level course that was all about dealing with external factors, many of which were beyond its control. However, the decade started peacefully enough with the arrival of twelve new locomotives and the disposal of an old friend.

Arriving in 1959 from one of the railroad's traditional suppliers, the U.S. Army, were twelve EMD GP7's. They were initially leased from the army with the railroad finally taking title to the units in 1964. Due to their flexibility, these locomotives quickly fit into the operations of the railroad in services such as the Fairbanks-Healy coal locals; the Healy yard and Suntrana branch work; the Fairbanks yard as switch engines and as the power for the Eielson branch local; the daily Anchorage-Whittier local and as yard engines in Seward. They went through several major transformations during their long lives with the first of these being a conversion from the AAR switcher trucks on which they arrived, to AAR type B trucks which came from the Alco units which they were replacing. Later they received larger fuel tanks so that they could run with the F-7s in road service when needed, their high short hoods were chopped down in the Anchorage shops, and finally in the mid-1970's the 10 remaining units were all rebuilt, 9 of them at the IC shops in Paducah, KY where they were equipped with EMD angled cabs and four exhaust stacks. During the rebuilding, all of the units were renumbered from the former Army numbers they had carried during their early days at ARR to consecutive numbers from 1801 to 1810. Eight of these engines received the new Bold Alaska paint scheme while 1801 and 1810 remained in black with yellow stripes along the frame. As they were at almost every railroad using GP7s or GP9s, these engines were outstanding performers that could undertake almost any job on the railroad. The only feature they lacked that would have improved them for ARR was dynamic brakes. Lack of this feature made it more difficult, but rarely impossible, for them to be used in some types of service.

One engine also departed in 1959 when steam locomotive 556 was moved to the Park Strip in Anchorage where she resides to this day. She spent 13 years in service, 3 years in storage at Birchwood and has since spent 64 years stuffed and mounted on the Park Strip in Anchorage.

In 1960 when the new Fairbanks depot was finally completed, it replaced the older wooden depot, leaving just the depots in Seward, Wasilla, Palmer, and Nenana as the legacy depots from the 1920's. These last four depots still survive today, but none are used as rail stations.

Finally, in 1960 the Army decided to permanently close down its port operations in Whittier with the exception of the fuel movements which would now be handled in a military pipeline from Whittier to Elmendorf-Fort Richardson. All of the Whittier port facilities including the main dock the DeLong Dock (but excluding the oil pier) and all of the buildings including the power plant, the military housing and the service facilities (but excluding the Army tank farm) were deeded to The Alaska Railroad. Effectively, only two customers remained in Whittier – Union Oil still had their tank farm active to receive and load eight to twelve railcars daily of petroleum products imported from the states and Columbia Lumber Company's mill remained active producing several cars of lumber daily.

The negative impact on the railroad was immediate. The twice daily turns that each took thirty-five to forty-five carloads to Portage to connect with the Seward-Anchorage freight trains and the daily passenger train (twice daily on Friday), all became a mixed train, numbers 23 and 24, that operated Monday through Friday. Some additional business would eventually return to Whittier with the start-up of the rail-barge operations over the next few years and tourism would eventually increase passenger service to levels exceeding those pre-1960, at least during the summer months, however, volumes have never returned to the levels produced by the Army during the 1950s.

Two years later, in 1962, Canadian National Railway (CN) started the Aqua Train rail barge service between Prince Rupert and Whittier with the first barge arriving on May 18, 1962. This provided the first steel wheel connection between Alaska and the rest of the continental rail system. This connection provided a service that opened many new sources of supply to Alaska businesses who had, almost from the beginning of Alaska settlement, been tied to whatever Seattle wholesalers found useful to stock. The first car off the barge, a Lehigh Valley Railroad gondola loaded with steel that was moving directly from loading at the mill in Pennsylvania to its ultimate user in Anchorage was a first-rate example of what could be done for customer using this new service – no middle men, no damage from transloading or longshoremens in Seattle or Seward, and, no need to deal with the steamship companies. Suddenly, Alaska merchants in the Railbelt could deal directly with suppliers in the East or Midwest; California or Texas; British Columbia or Alberta with transportation as easy, or even easier, to arrange than it was for goods coming from Seattle. In reality, this service took an early step in linking Alaska with the rest of the continent in a way that the converted Liberty ships and barges out of Seattle never could.

The initial four track, 250 foot long barge in this service were ones similar to those used along the lower British Columbia mainland and to Vancouver Island and along the north-western Washington coast to handle movements between many remote sawmills, pulp and paper mills and rail terminals in Vancouver and Seattle<sup>17</sup>. Barges this size would hold, at most about twenty, mixed 40 and 50 foot railcars. While it was a good idea to use this type of existing equipment when undertaking a new venture, it quickly became evident that this new venture was going to be successful and that CN quickly needed to bring in more capacity. Within a few months, CN's marine contractor had located a barge that had five 300 foot tracks and could accommodate twenty-five to thirty railcars. This barge would prove to be sufficient to handle much of the traffic available at that time, however, during times of high demand such as the post-earthquake era, the building of the Prudhoe Bay oil fields and the pipeline to Valdez and

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<sup>17</sup> At the time the CN service began, there were over 40 railcar barge slips on the coast between Whittier and Tacoma with the lion's share being in British Columbia. Some, like Whittier, were in common carrier service, some were designed to serve specific mills, mines or factories and some did a little (or a lot) of both. Some were even involved in passenger service. Even in 1980 there were still 6 slips in Alaska, 9 in Washington state and at least 24 in British Columbia. Today, the active slips include 1 in Alaska, 1 in Washington and 4 in British Columbia.

the oilfield expansions of the early eighties, a second barge would often be added to the service. This barge, frequently one similar in size to CN's first barge, would be towed along behind the regular barge.

CN would eventually see enough growth in the service that, in 1983, it made the decision to expand by purchasing a single barge that could handle over fifty, 50 to 60 foot, freight cars. This eight track, 425 foot long barge would enter service in early 1984. The new barge was also fast. The speed at which the smaller barges could be towed dictated that Prince Rupert-Whittier-Prince Rupert round trip times would be between 12 and 16 days with shorter times usually in the summer while the longer, slower trips were in the winter. With the larger barge, the round trip times were reduced to 9 to 13 days. With time off for maintenance, this meant that the new barge would have about 31 trips annually versus the 24 that the old service usually provided. Having this barge available also offered CN and ARR opportunities to approach markets differently than they had in the past. For example; with the prior barge, during the winter, the track space was often filled with winter type commodities such as liquified gases used for heating fuels, snow machines and products needed for winter oil field operations such as chemicals that reduced drag in pipelines due to cold weather. There was little room for building materials that were only going to see limited use until spring. However, with the new barge, it was possible to move such freight allowing distributors to build up their stocks beginning in winter which let them to be "first to market" in the early spring. At the same time this made it possible to keep lumber and building board producers on CN's line to Prince Rupert, their North Line, busy at a time of year when business was usually down. Thus, CN and ARR were able to make their customers look good, usually at a lower cost than would otherwise be possible and fill the barge at a time of year when most marine carriers in the Alaska trade would be operating with unused space on their vessels. Ultimately, this "Aqua-Train" barge, would set a longevity record in Alaska Rail-Barge service with thirty-seven active years. Sadly, this pioneering service was discontinued by CN with the last barge departing Whittier on March 16, 2021, nearly fifty-nine years after the service began.

However, Canadian National was not the only new rail-barge player in the Alaska trade. Two additional players would enter the market by mid-1964 with each offering the railroad access to new markets. The second rail-barge operator in the Alaska market was operated by a Crowley Maritime division - Puget Sound – Alaska Van Lines - operating as Hydro-Train. Its first rail barge, "Claire Engel", arrived in Whittier on August 10, 1963. The initial barge used in this service was a five track, 300 foot barge similar to what "Aqua-Train" had finally adopted. However, in the same way that the initial CN barge had been too small, so was the initial "Hydro-Train" vessel.

Within a year, the new service, by then, a separate subsidiary of Crowley named Alaska Hydro-Train (AHT), would outfit first two, then four, and then six of the parent company's 342 foot by 76 foot barges with six tracks that comfortably held thirty-five to forty 40 foot to 50 foot railcars. It also began running two of these barges on each trip with one being loaded by Northern Pacific (now Burlington Northern Santa Fe) in West Seattle and the second being loaded by Union Pacific on Harbor Island in Seattle. By the early 1970s, even these barges were too small for the available business and six 400 foot by 105 foot, eight track barges were brought into the service. With good planning, these barges could each easily hold fifty to fifty-five railcars, and, like their smaller brothers, they were handled in two barge tows<sup>18</sup>. Initially, these barges were operated on weekly schedules, however, with business increasing, they began in the early 1970s to operate out of Seattle every five days in summer and weekly during the winter. In the three years when work on the Trans-Alaska Pipeline and the building of the infrastructure for

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<sup>18</sup> Not all of the Crowley six track barges lost their rails. At least one still had railcar capabilities in 2000 when it was leased to Sea-Span, the largest tug and barge operator on the Canadian West Coast. Sea-Span would use this barge to supplement their own equipment to provide thrice weekly service between the British Columbia Railway in North Vancouver and Union Pacific on Harbor Island in Seattle.

Prudhoe Bay was at its peak, two more 400 by 105 foot barges were rebuilt with eight tracks in order to be able to provide reliable departures every five days year round.

As the 1970s ended the service returned to weekly but was increased to every five days in the summer and weekly in the winter from 1982 through 1984. After this, it returned to weekly but with one important change.

In 1984, facing competition from a company called Seaway Express, AHT added a second deck to three of the barges to handle about 100 truck trailers per voyage on one of the two barges on each tow. The barge with the second deck was loaded in West Seattle using a rail mounted ramp that could be moved into position on barge slip either before or after the railcars were loaded (usually after since the barge was more stable and sitting lower in the water). Likewise, in Whittier, a similar rail mounted ramp was used to unload and then backload the second deck. This service pattern remained in place until the equipment began to age out of the service.<sup>19</sup> At that point, Crowley, whose other Alaska operations had declined due to a shrinking amount of improvement work on the North Slope oil fields and whose operations elsewhere were quickly growing, made the decision not to replace the rail-barge equipment and soon thereafter announced that they would not be continuing the rail-barge service. They were replaced in the service by Lynden Transport's Marine Division, however, that is a story for a later chapter.

The final rail-marine service that was initiated in 1964 was a product of the desperation of the Alaska Steamship Company to stay relevant in the Railbelt market and the 1958 revolution in Cuba.

By 1963, Sea-Land had announced that , within the next year, it would be starting up operations directly into the new port facilities in Anchorage with equipment that was much larger, and more modern than that of Alaska Steamship. This would present the latter company with serious competition that had a high likelihood of destroying its operations from Seattle to Seward and Valdez. If they wished to stay relevant in the Railbelt market, another approach would be required.

Prior to the Cuban revolution, there was railcar service to the Island from several locations on the East and Gulf Coasts of the U.S. but primarily from Florida. The vessels in this service had been idle since the U.S. had broken off both its diplomatic and trade relationships shortly after the revolution. Among these was a ship, the "City of New Orleans", that had a capacity of about forty-five to fifty, mixed 40 foot and 50 foot railcars. All of the cars on this ship were carried within the ship with little or no exposure to the elements. All of these characteristics made it an attractive candidate for Alaska service. It did, however, have one problem that would create a unique operational challenge – since it was used in international service to Cuba, it had not been built in an American shipyard and did not require an American crew. These features made it a vessel that, under an American law known as the Jones Act, could not carry domestic cargo between two American ports.

Fortunately, for Alaska Steamship, there are a few, very limited exceptions to the Jones Act. Specifically, there is one which would permit operation of the "City of New Orleans" in the Alaska trade if the cargo carried was on a through route between points in the Continental U.S. , including Alaska, and the cargo was carried by a Canadian railroad over the portion of the route that led to or from a Canadian water facility that was used to connect the route to the final destination in the U.S. if that route was recognized by the Interstate Commerce Commission (ICC) and the tariff for that route and type of cargo had been filed with the ICC<sup>20</sup>. With this information in hand, Alaska Steamship formed a new subsidiary named Alaska Train-Ship Company, Purchased "City of New Orleans", renamed it "Alaska", put the ship into a

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<sup>19</sup> One of the double deck barges experienced a "pull-apart" while on a southbound voyage. Fortunately, neither end of the barge sank and Crowley was able to recover both barge segments.

<sup>20</sup> This exception was originally designed to deal with several situations involving Great Lakes freight car ferries.

facility for repairs, upgrades and repainting (since it had been idle for almost five years), found a workable car-barge slip in Delta, British Columbia<sup>21</sup> on the Fraser River and went to work with The Alaska Railroad and Great Northern Railroad, the serving carrier for the route from Seattle to Delta, putting into place the tariff for the through service and filing said tariff with the ICC. The service was ready to begin in early 1964 with the first voyage scheduled to depart Delta on March 29, 1964. That departure did not happen...

The Good Friday earthquake on March 27, 1964 intervened, and the tsunami that followed destroyed the two year old rail-barge slip in Whittier. The first voyage finally occurred in early June 1964 with "Alaska" docking at the new Whittier rail-barge slip on June 13, 1964, only 78 days after the complete destruction of the previous slip.

"Alaska" proved to be the key to staying in a market that the railroad was on the edge of losing to a new competitor, Sea-Land via the Port of Anchorage. The market in danger was perishable products. However, "Alaska" turned out to be the fastest vessel on the Northwest Coast, far faster than Sea-Land's converted T-2 tankers.<sup>22</sup> This made it the primary means of moving perishable goods to the state's Railbelt until the arrival of the even faster Totem Ocean Trailer Express (TOTE) ships in the mid-1970s. The Alaska Railroad even purchased twelve mechanical refrigerator cars built to the design of a group of Pacific Fruit Express cars on order at that time. These cars were used almost exclusively in service to and from Seattle until "Alaska" ceased operation in 1978<sup>23</sup>.

When that end came for "Alaska" it was largely due to three issues:

- The introduction of TOTE with an even faster service,
- A fall off of business after the decline of freight following initial completion of the oil field and pipeline work of the mid-1970s, and,
- The fact that all of the ship's below main deck capacity was limited to forty foot railcars due to the length of the elevators needed to get to the lower deck. Unless the lower deck space was full "Alaska" effectively became a very fast, very small, over crewed, very expensive to operate barge. By the late 1970s the availability of such cars was drying up and even if a small fleet could be created to support just the operations of this ship, most of the 40 foot cars were "aging out" of service in that they had reached their 40<sup>th</sup> birthday and could no longer be used in interchange service. They also were mostly restricted to only a 50 ton loading capacity which made them less competitive with more modern equipment. While some 40 foot cars, mostly boxcars, would remain in service to support very specialized markets until the late 1980s, mostly on the Canadian National barge service, their time as the general service freight car of choice had ended.

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<sup>21</sup> The location of the slip became known as the Delta-Alaska Terminal where remnants of the rail-barge slip still exists although it long ago ceased to be in serviceable condition or even in a condition that would be possible to restore.

<sup>22</sup> The original Sea-Land ships used in the Alaska trade had been built as T-2 tankers during World War II. An additional section was added to lengthen the hull of the ship and provide more room for containers and the power system was upgraded to handle the additional weight of the vessel. However, the speed of the Sea-Land ships remained only slightly faster than the T-2s had been.

<sup>23</sup> After "Alaska" left service the cars would make occasional trips on the AHT barges to Seattle, however, most of their time was idle until 1982. That year, a program was put together that allowed commercial fishermen to bring their catch to Whittier, load them into these cars which had been brought into Whittier that morning on the 5:00 am shuttle from Anchorage. They would return to Anchorage on the final shuttle of the day and, before midnight that evening, would be spotted at Anchorage International Airport for their contents to be loaded to cargo planes destined to all parts of the world. Usually, there would be three of these cars each day during salmon season.

“Alaska” was unable to save Alaska Steamship which finally gave up in 1971. The ship was then purchased by Crowley Maritime for service during the emerging oil boom of the 1970s. However, as she lost market share to TOTE in the perishables business after 1976 and as other business dropped off with the end of oil related construction her brief time of success ended and she had her final Alaska voyage in early 1978. This train-ship concept did not die. It continues to this day with Genesee and Wyoming’s joint venture with SEACOR called CG Railway between Mobile, AL and Coatzacoalcos, MX. In 2021 they inaugurated two newly built vessels to replace their older vessels in this trade. They chose vessels over barges for speed.

Rail barge service greatly streamlined the ability to rail traffic to Alaska. Previously it had to be transloaded from rail to cargo vessel and then reloaded back to rail again. It went a long way toward making the supply chain to Alaska became much faster, efficient, and less expensive. However, another type of service was emerging and would also become an important, although much more complex, portion of the service offered by The Alaska Railroad. Again, it would involve integrating the railroad and marine operations but, in this case, would also include trucking. For this service, the railroad and its maritime partners would begin with their own technology. However, over time they would gradually migrate to something much more similar to what would become international technology standards. The service? Containerization and intermodal.

The trade lane to Alaska and the Yukon was a great place to start containerization to improve handling efficiency. The White Pass and Yukon and a partnership of the Alaska Steamship Company and Alaska Railroad were among the pioneers in this area. But as with many new technologies, the first experimenters often did it on an incremental basis that did not fully leverage the technology.

- Alaska Freight Lines was the first to do a form of containerization to the Railbelt in 1949, that were essentially trailers shipped on barges<sup>24</sup>. In 1952 Ocean Van Lines started the first true container service to Alaska using converted Navy LST (Landing Ship Tank) vessels.<sup>25</sup> But Alaska Freight Lines quickly saw the advantages of containers vs. trailers for barge loading and bought out the Ocean Van Lines containers and moved them to its barges.
- 1955 Alaska Steamship Lines begins moving containers in the holds of its ships with bulk freight on deck. They went all in and completely converted two of their World War II Liberty ships into dedicated container ships in 1964.
- In 1959 the Alaska Railroad purchased a fleet of 160 twenty-four foot containers designated by the railroad as Unit Rail Boxes (URBs). A new container crane was also placed in service in Anchorage to handle this new traffic. In 1962 six straddle cranes were delivered for handling containers and trailers at the Port of Seward.
- During the second half of the 1950s the railroad began to purchase a steady stream of 50 foot flat cars. Some were designed for general service while one group, the 12800 series, were light weight cars designed specifically to handle 24 foot containers. During this period, most of the 50 foot flat car fleet would be used to move containers out of Seward. Although many of the containers stopped moving after the earthquake, the investment in flat cars proved to be a good one. It resulted in the railroad having the perfect fleet for moving construction materials for pipeline construction as well as supporting the oil field construction and expansion projects.

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<sup>24</sup> This is the traffic that 40 foot gondolas obtained early in the rehabilitation program that were converted to flat cars were to handle.

<sup>25</sup> To this day there is a track immediately south of the Anchorage passenger depot that is known as the OVL track. The small area around that track was the original Ocean Van Lines Anchorage terminal.

- In 1964 Malcolm McLean's Sea-Land expanded from the East Coast out to Seattle and started service to Alaska by buying Alaska Freight Lines and switching the traffic from barges to somewhat faster container ships and moving from 24 foot to larger 35 foot boxes, further improving the economics and service of the business. Ironically 40 foot trailers were legal in 1959, but Sea-Land standardized on a 35 foot box. In order to move their freight to Fairbanks Sea-Land leased a fleet of 75 foot flat cars from Trailer Train (TTX), cars that were quickly becoming obsolete in the Continental U.S. But they worked fine for the Sea-Land boxes. The railroad would take over the lease of some of the cars when the Whittier shuttle was inaugurated and would take over the lease of the last 20 that Sea-Land had, when agreement was reached to move their Fairbanks business on regular 89' flat cars owned or leased by the railroad. These last twenty 75 foot flat cars were then converted by the railroad to handle three 20 foot containers that were being brought to Alaska by various barge lines. Since many of these barge line containers had 2 foot extensions on each end to handle lumber efficiently, the pads that were attached to the deck to hold the containers could be positioned almost perfectly to fill up the entire length of the car with revenue freight.

In the 1980s trailer sizes increased to 45 feet and then to 48 feet and international container standards were set at 20 feet, 40 feet and 45 feet. These sizes quickly overtook the 24 foot and 35 foot boxes used in the Alaska trades. When TOTE entered the market in 1975 providing service for the longer trailers, Sea-Land started facing obsolescence issues competing in the container business. In 1987 they upgraded their vessels to the three ships used today which can accommodate 40' and 45' boxes like most other container carriers. Meanwhile, TOTE has also upgraded its newest vessels to carry 53 foot trailers and remains one step ahead.

The rapid evolution of the key supply chains to Alaska threatened to obsolete the millions of dollars spent to modernize the Port of Seward and to remove the opportunity to compete for the Anchorage market for containerized goods. However, another, unexpected challenge would change the entire playing field and completely restructure how the railroad could and would look these markets.

### **3.d) The Earth Shook**

On March 27, 1964, the Good Friday earthquake destroyed the Port of Seward. Both of the railroad docks plus the petroleum docks for the Standard Oil and Texaco had basically ceased to exist. The railroad's new yard was mostly gone, with much of it having slid into the harbor. Locomotives and freight cars were scattered all over the city some many hundreds of feet from the rail yard. Other than three tracks, two miles north of where the main yard had once been located (near the present day yard and depot) the terminal no longer existed. It would never fully return to its former prominence.

The earthquake also destroyed the two year old railcar barge slip in Whittier along with all the housing for railroad employees including the depot. The Union Oil and the Army petroleum dock were both gone and Union Oil and the Army both had their petroleum storage tanks destroyed. Columbia Lumber had become nothing more than a flat spot on the beach. However, in Whittier, both the railroad dock and the DeLong dock survived. This would be critical to the railroad going forward.

There was substantial damage to the railroad's right-of-way with the worst problem being south of Anchorage, particularly around Potter and south of Portage. At Potter, the main line going up the hill from sea level to the Anchorage plateau had literally fallen off a cliff and no longer existed. Near Bootlegger's Cove in Anchorage, the mainline rail had been twisted into hairpins standing ten, or more, feet high above the track. Fortunately, in the Anchorage yard and maintenance facilities, although there were many cases of minor damage and two shop buildings that had significant problems, most of the facilities remained reasonably functional. Near Portage, several miles of the main line had become a

series of waves, both vertical and horizontal, some as much as ten feet high, that looked like an amusement park railroad.

Freight service between Anchorage and Fairbanks was restored eleven days after the earthquake on April 6, and passenger service on April 11. South of Anchorage, around Portage, the ground had subsided as much as 10 feet, and tidal flooding was a huge problem<sup>26</sup>. Fortunately, the tunnels to Whittier were not significantly damaged. Freight service to Whittier was restored on April 20, but the Whittier railcar barge slip was not replaced until June 5.

The rail barges kept operating during the entire period of the quake recovery. The day after the earthquake the navy dispatched a tug boat from Bremerton, Washington to Oregon where it took a 100 ton capacity floating crane in tow and brought it to Whittier, arriving there about two weeks later. Once there, it began unloading the railcar barges by picking up the cars and placing them on the track. The cars would then be moved by whatever means was necessary to get them to the yard tracks so that unloading could continue at the dock. By the time the first train arrived on April 20<sup>th</sup> there were well over 100 cars awaiting movement to Anchorage or beyond.

Freight service was finally restored to Seward on September 12,. However, unlike Whittier there was no freight to move nor would there be, other than inbound rebuilding materials and supplies, for some time into the future. A new yard, a new engine house and a new dock had to be constructed (the latter facility is now used as the cruise ship terminal) and was 2 miles closer to Anchorage than the old docks. Almost nothing of the original Seward terminal would be saved.

The immediate damage to the railroad from the earthquake was estimated at about \$27 million. However, the real damage would be much greater and only realized much later. It would come from the complete reconstruction of the supply chains for Railbelt Alaska.

One of the things that happened due to the earthquake was that companies with facilities like oil terminals in Whittier and Seward that were destroyed in the earthquake rebuilt them in Anchorage. And with the port of Seward out of service, and Anchorage now by far the largest city in Alaska, business development started in earnest at the Port of Anchorage. It was soon determined that a tsunami did not hit Anchorage after the earthquake because of the geography of Cook Inlet. When Sea-Land started service to Alaska within weeks after the earthquake, they chose to use the Port of Anchorage as their port of call since that is where most of the traffic was destined and it was also where functional port facilities were available. Although there was a slightly longer operating time from Seattle to Anchorage than there was to Seward, Anchorage had a working port. Seward did not, and would not anytime in the near future.

Initially Anchorage was not considered a particularly viable port location. It had huge tidal variances, (up to 36 feet) lots of silting in Cook Inlet, and strong currents. But worst of all, Anchorage, being at the end of Cook Inlet was not an ice-free port. Until the growth triggered by the military in World War II, the population base wasn't big enough to cause people to want to deal with all these issues. There was a dock in Anchorage and it was used occasionally when the inlet was ice free. But even before the earthquake created the need to rebuild Seward's facilities, the advances that had taken place in shipping and maritime technology provided the incentive to find a way to make Anchorage a viable port. A dock was built farther out where the currents might help keep the ice away. Reinforced vessel hulls could also

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<sup>26</sup> Until the track could be raised above water level at high tide, the trains operated south of Anchorage according to when the tide table, not timetable, said it was appropriate to do so. Fortunately, this was not a new experience for ARR dispatchers since the trains that switch the barges in Whittier have always been scheduled around the tides at that location to ensure that they will be in Whittier at time that gives them the longest period to switch the barges between the tidal extremes.

handle a bit of ice and ice breaking tugs were provided at the port to keep the channel open<sup>27</sup>. Anchorage had grown to be the primary market in the Railbelt and the efficiency lure of being able to directly serve the largest market provided incentives to develop solutions. After the earthquake, Anchorage soon became the primary port in the Railbelt. Seward was relegated to secondary status for specialty cargos, and Whittier remained the port for direct rail shipments to Alaska.

The earthquake caused a permanent shift in traffic with Anchorage quickly becoming the largest Port in Alaska serving the largest population base in Alaska. While the reconstruction drove up freight volumes, and the three rail car services to Whittier streamlined supply chains for some of types of traffic, the shift away from Seward to Anchorage for most of the general freight and petroleum traffic was a significant loss to the Alaska Railroad, and the line from Portage to Seward has frequently struggled to remain viable since the earthquake. Ultimately, the supply chain shifts would likely have happened anyway, but the earthquake wiped out all the improvements recently made to the port in Seward making it an easy choice to rebuild in Anchorage. Ironically when The Alaska Railroad chose Anchorage to be their headquarters, they kicked off this evolution. It is interesting to speculate what might have happened if the railroad had chosen somewhere else, perhaps the Palmer or Wasilla area (closer to the coal fields that were the initial objective).

All of this massive change happened very quickly in the span of just 25 years. These changes really marked a key pivot point in the history of the Alaska Railroad, and set the stage for the railroad that it is today.

#### **4) The Oil Boom**

The recovery from the 1964 earthquake was largely complete by 1966 with the opening of the new, smaller yard and dock in Seward and the result was freight volumes on the Alaska Railroad going down again. But oil and gas development was starting to pick up steam in Alaska and would drive the next economic cycle. Oil and gas was discovered in Cook Inlet in 1957 and production grew rapidly. A pipeline for carrying natural gas to the Anchorage market was completed in 1962 and survived the earthquake. Soon thereafter, Anchorage power plants which had burned coal began to switch to cheaper natural gas. This led to the closure of the last coal mine in the Sutton area in 1969 and the end of coal trains from the Matanuska River Coal Fields to Anchorage. The original reason for building the railroad was gone. It was time to find a new life.

But the big discovery was the North Slope fields. Getting the oil to market from the arctic was not going to be an easy task. Initial planning for the construction of a pipeline from the North Slope fields to Valdez and the construction of the oil field facilities needed to produce the oil started in 1969 after an auction by the state to award drilling rights to potential field production operators<sup>28</sup>. The first pipe arrived in Valdez for the pipeline portion of the project later that year.

Interestingly the Alaska Railroad had, in conjunction with Crowley Maritime, established a barge dock and small rail terminal in Valdez in 1965 to aid in the post-earthquake reconstruction of Valdez which had been the hardest hit and most seriously damaged community in the state. This facility was expanded in 1969 in expectation of the opportunities that might be presented by pipeline construction. It remained in service and saw volumes ramp up dramatically in 1974 with the start of construction on the Trans Alaska Pipeline System (TAPS). The builders and designers of the pipeline had expected to move the pipe from its original resting place in Valdez by truck to wherever it would be needed along the

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<sup>27</sup> Because of the tidal range and swift currents, the ice in Anchorage rarely gets particularly thick.

<sup>28</sup> This auction would result in the state receiving almost \$1 billion for rights to drill for and produce oil from various properties on the North Slope. It would be the state's first taste of serious oil money.

route to Prudhoe Bay. This is the way it had always been done back in the small states, like Texas, and they saw no reason it couldn't be done in Alaska. They failed to think through the effects of weather, lack of populated places along the route, lack of trucks and truckers who could or would operate in the Alaska environment and the lack of maintenance capabilities for equipment in Alaska. Ultimately, the original plan would fail to meet the reasonableness test, to the railroad's benefit.

After the pipe was delivered to Valdez a pipe coating and welding facility was put in place to prepare the pipe for movement and for eventual placement. After the realization that the trucking capacity simply did not, nor would ever exist to move all the pipe in a timely manner, it became time for plan B. In this, much more successful scenario, the pipe was coated and welded into 80' lengths and loaded onto flat cars which were floated by barge to Whittier. It was then taken to Fairbanks from where it could be more easily distributed up and down the pipeline route. North of Fairbanks the haul road was constructed to support the pipeline construction and development of the oil fields on the North Slope, and the pipe was transported to the construction sites from Fairbanks. Pipe was also delivered to Seward and moved to Fairbanks, where another coating and welding facility was put into service. Pipe from Seward to Fairbanks was typically moved in 40' sections in the old war surplus 41 foot gondola fleet. Most of this pipe was moved in a three-year time span from 1974 through 1976. The pipeline was finished in 1977.

The railroad used little 45-ton switchers in Valdez acquired from government surplus in 1974 and were retired in 1983. The 1946 Congressional action that allowed The Alaska Railroad to acquire government surplus at no cost other than transportation to Alaska was once again the gift that kept on giving. As pipeline movements ramped down in the late seventies the value of the Valdez terminal diminished significantly and it was decommissioned in the late 1970s.

In addition to the pipe, lots of other construction equipment and supplies were moved to Alaska. Drilling mud, and drag reducing agent to inject into the pipeline, were two major commodities. Schlumberger used some very distinctive cars to move drilling mud to Alaska. They were red and gray and had three large bins mounted vertically on the car frame. The drag reducing agent was moved in tank cars. Most of the heavy equipment for the pipeline construction arrived in Fairbanks by rail and after the pipeline was completed, moved back south by rail to the continental US for resale. Ultimately, the railroad would handle far more carloads of material to support the oilfield operations and the dozens of major follow-up projects that would take place, than they would for the pipeline construction project.

Fortunately, the oil boom on the North Slope did not snuff out the coal business North of Healy like the Cook Inlet fields did for the Anchorage market. Natural gas is injected back into the wells in Prudhoe Bay and while gas pipelines have been discussed and proposed, nothing has been built, so coal still is the primary form of power generation for railbelt north of Healy. And, in fact, the only coal fired power plant built anywhere in the U.S. in the past decade has been the University of Alaska power plant near Fairbanks.

The construction of the pipeline also led to the building of a refinery in the Fairbanks area which started up in 1977. This reduced the flows of refined petroleum into Fairbanks, but it led to a whole new boom in refined petroleum products moving south to the much larger Anchorage market that continued for 37 years. After the earthquake and shortly thereafter, the development of a refinery on the Kenai Peninsula, the Alaska Railroad lost much of the petroleum business supplying Anchorage and was left with just the supply for the Tanana and Yukon river communities and Fairbanks.

The big market in Anchorage became jet fuel for Anchorage International Airport and Elmendorf Air Force Base. There was also naphtha that was exported from Anchorage. Anchorage International Airport achieved international prominence in the 1970's when passenger carriers would stop for refuelling on flights between Europe, the US, and Asia. As airplane efficiency and range improved, this traffic had largely dried up by the late 1980's and early 1990's. But it was increasingly replaced by air cargo.

Anchorage International Airport has historically ranked as the third through sixth largest air cargo airport in the world and, most years, is the second largest in the U.S. Most of the cargo flights between Asia and the US and Europe stop to fuel in Anchorage. A plane has two choices, carry lots of fuel for long range, or carry lots of cargo and generate more revenue per flight. Eventually, this led to the air freight carriers building their international sorting centers at the Anchorage airport attracting even more flights to the region<sup>29</sup>. This led to significant volumes of jet fuel coming south from the Fairbanks refinery to the Anchorage airport every day and was a huge source of revenue for The Alaska Railroad. The Anchorage airport has been a robust economic engine for Anchorage and surprisingly The Alaska Railroad.

But The refinery began to scale down in 2012 and fully closed in 2014. Now petroleum products again move north from Anchorage to Fairbanks, but Fairbanks is a market that is about 25% the size of the Anchorage region, so the volume is lower.

The construction boom in Anchorage and difficulty finding truck capacity led to the start of aggregate trains on the Alaska Railroad. Anchorage Sand and Gravel (AS&G) set up a mining operation near Palmer and railed the traffic into Anchorage in dedicated, 80 car, trains. Initially, these trains were able to make a daily round trip. However, improvements in loading and unloading processes by both the railroad and the customer along with improvements in equipment in the service gradually brought the turn times down to where these trains were regularly making two round trips daily with time to spare for regular locomotive servicing. This is incredible efficiency, helping to make this business viable even with the extreme seasonality caused by the winter weather.

The business was seasonal during the warmer six months of the year. However, since this was also the slow season for coal shipments The Alaska Railroad was able to use some of their hopper fleet in the summer in gravel trains. Initially, equipment availability limited the number of train sets in service. However, in 1982 AS&G acquired 82 new cars of their own and one of their competitors, Conrock, leased 80 small capacity gravel hoppers. This permitted four train sets to operate two round trips daily giving the railroad a total of eight round trips per day. As something of a bonus, the AS&G hoppers were also available for coal service during the winter months when they were most needed. The railroad tried to also use the Conrock cars for winter coal. However, their small cubic capacity limited the amount of coal that could be loaded in each car and the customers began discouraging their use in coal service.

By 1982, the average turn time for these trains had been cut to about 9.5 to 10 hours which provided enough slack time to ensure that minor failures would not prevent achieving two turns per day for all three of the Anchorage companies using the service. Usually, one train would be taken out of service on each Sunday for a complete inspection and performance of minor repairs on the equipment in that train. Doing this on a rotating basis helped prevent unplanned failures. The volume of this traffic led to improvements in the Anchorage area culminating in installation of some double track both north and south of the Anchorage yard and Centralized Traffic Control to expedite the movement of the trains through town.

Totem Ocean Trailer Express (TOTE) entered the Alaska trade with roll-on, roll-off (RO-RO) trailer service from Seattle to Anchorage in 1975 just as the pipeline boom was beginning to stress existing supply chains. On the surface RO-RO does not sound very economical, but it does have advantages. Essentially these vessels are like large multi-decked ferries. Trucks are driven on board and the trailers parked and secured on each of the decks. No cranes are needed to lift the trailers on and off the vessel. No chassis are needed at the end points. Any trailer that runs on the highway can take a trip to Alaska and back. The service provided was comparable to or, in most cases, superior to Sea-Land's performance. TOTE's

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<sup>29</sup> These facilities are similar to the FedEx operation in Memphis. In fact, it is Memphis that Anchorage usually competes with in the U.S. for either first or second place in the freight race.

level of service went a long way toward offsetting any economies obtained by efficiently stacking the boxes without wheels on the vessel. TOTE had no affiliation with the Teamsters so they made more use of the ARR intermodal service than did Sea-Land. TOTE did compete for traffic with both the rail barges and with Sea-Land. During the early 1980s many finished vehicles for the Alaskan market were handled on AHT barges loaded on multi-level auto cars as well as on special rack containers on Sea-Land. Now most of these are handled by TOTE using deck space specifically designed for motor vehicles and machinery.

From the early 1960s though the mid 1980s The Alaska Railroad continued to add to and update their locomotive fleet. In 1963 the first second generation locomotive arrived at Whittier – ARR's only GP30. F7B unit 1501 which had been wrecked, was used as a trade-in for GP30, 2000. Three additional locomotives – GP-35s (the successor model to the GP30), were ordered and delivered in 1964.

In 1969 and 1970, the Alaska Railroad purchased eighteen second hand F7's. Six from the Great Northern and twelve from the Denver and Rio Grande Western. It is not clear what prompted these purchases. The pipeline boom was on the horizon, but would not yet actually kick off for another four to five years. These additional F7's led to the retirement of the rest of the RS-1s and derivative models by 1973.

But that left only a short gap in the Alco era of the Alaska Railroad. The next big influx of power consisted of thirteen Alco MRS1 locomotives from Army Surplus in 1974 and 1975. Eleven were placed in service with the other two supplying parts to keep the others operating. These were very unique units built for service overseas with very low cabs, and were probably not fun to operate. But they provided some yard and local power, especially in Anchorage, which allowed the GP7's to be sent out for major rebuilding and upgrading. One or two of the MRS1 locomotives very occasionally soldiered on during the traffic boom between 1981 and 1984.

The twelve original GP7's had been reduced to just 10 units with one destroyed in the earthquake and another in a wreck. The first GP7 was sent to Morrison-Knudsen in Boise, ID for overhaul. MK was so optimistic about this program, they commissioned a Howard Fogg painting of this first unit against a backdrop of Denali. But the remaining nine were rebuilt by the famous Illinois Central GP-7 and GP-9 rebuild program in Paducah, KY. The first unit back, 1801, arrived in the traditional black and yellow paint as did the units from MK which became number 1810. However, the last eight units came back in a stunning new blue and yellow scheme designed by Chester Mack who also developed the bicentennial scheme for two FP7's and one caboose. Locomotive 1802, the first of the 'Bold Alaska' painted units, also had a large snow plow mounted on the front pilot and was the typical power for the Whittier Shuttle trains for many years with the bicentennial caboose. The GP7 rebuilds were completed in 1976 and 1977.

In 1976 three bicentennial pieces of rolling stock were rolled out to support the Bicentennial of the USA. FP7's 1510 and 1512 were repainted into the Bicentennial scheme designed by Chester Mack. These units led the AuRoRa passenger trains between Anchorage and Fairbanks which operated daily during the mid-May to mid-September peak season and operated once a week during the winter time as a mixed train. A caboose was also painted in the Bicentennial scheme and numbered 1776. This caboose was regularly assigned to the Whittier shuttle trains. 1510 and 1512 were essentially dedicated to passenger service for about 6 years, through 1981. About 1978 the two engines received a nose door with a headlight off of former F7's being traded into EMD for the final order of GP40-2's. The upper headlight was converted to an oscillating light in the hopes that this would help reduce the risk of grade crossing accidents.

In 1981 F7's 1500, 1502, and 1517 were repainted into the 'Bold Alaska' scheme and assigned to passenger service. In 1982, 1503 had an HEP engine added to it and was also repainted into the 'Bold

Alaska' scheme along with 1506 and 1508. Because the B units were equipped with a steam generator (1517) or HEP (1503) and the A units were not, unfortunately they usually operated in an AAB configuration. But they displaced the FP7's who then spent most of their final 5 years in work train and snow fleet service, but still painted in red, white, and blue. Also in 1981 the Alaska Railroad acquired two E-units from Amtrak. One was HEP equipped and one was steam generator equipped. Starting around 1983 the passenger train might be pulled by an F7A, F7B, and an E9A. The E-units were easily the worst operating EMD power ever acquired by The Alaska Railroad. They could be very slippery on grades and were clearly uncomfortable when negotiating tight curves. In 1983 and 1984, they were used several times on the "boat trains" to Whittier that handled the passengers off of the Cunard cruise ships during the first year that ARR handled this business. From this service, they gained the nicknames "Lusi" and "Ti" as in Lusitania and Titanic. That said everything needed about how the people who had to work with them felt about their "merits". All of the F and E units except 1503 (which was retained for its HEP capability) were retired and sold by 1986.

Interestingly, 5 EMD built MRS1 variants were acquired from the Navy in 1977. These locomotives shared the same prime mover and had the same horsepower as the railroad's F7's and GP7's. It seemed strange that these units, more in-line with the equipment already on hand, did not spell the end for the Alco MRS1's. Only one of the five units ever saw any use. Locomotive 1718 was painted in the 'Bold Alaska' scheme and in 1983, was assigned to a special command train called ALCOP (ALternate COmmand Post). Interestingly this unit went to the Alaska Museum of Transportation instead of the much more utilized Alco MRS1's. It has been speculated that maybe the intent was that the less heavily used prime movers from the EMD MRS1's would be transplanted into some of the F7's to extend their life pulling the passenger trains, but it never happened. The units were white elephants dressed in yellow paint.

The other big transformation in the locomotive fleet was the retirement of all but two of the second hand F7's in 1975, 1976, and 1978 for use as trade-ins for the acquisition of fifteen GP40-2 locomotives. The first batch of six was delivered in 1975 in black and yellow, the second batch of five was also delivered in 1976 in black and yellow. Many of the second batch did not receive snowplows for a number of years and were fitted with radio control equipment so the large freight trains of the time could have distributed power. The final four units were delivered in 1978 in the 'Bold Alaska' paint scheme. These were the last new locomotives purchased by the Alaska Railroad under Federal ownership. GP35 number 2503 was wrecked in a derailment in 1976 and rebuilt and upgraded to a GP40 by the Anchorage shops and renamed the "John E. Manley" who was the General Manager of the Alaska Railroad from 1962-1971 and managed the earthquake recovery.

New passenger equipment was purchased in 1971 as Amtrak was formed and most railroads in the continental US exited the passenger business. Amtrak had a strong preference for the Budd stainless steel equipment, so many railroads that had fleets built by other builders had surplus equipment. The Alaska Railroad bought at least thirty coaches, dome cars, baggage cars, diners, and café cars from Union Pacific that became the primary passenger equipment replacing many of the army hospital cars. A couple of the hospital cars that were combination baggage/coaches survived until the mid 1980's and were regulars on the Whittier shuttle trains.

A significant wreck happened on July 5, 1975. The passenger trains often slowed down or even stopped at times for views of Denali and Hurricane Gulch. A southbound freight train crashed into the rear of a southbound passenger train. Sixty-two people were injured and one person died. One of the UP dome cars buckled and was destroyed in the collision. After the collision, until the cars could be fully inspected and certified for service, a ragtag train of extra UP cars and some of the former Army hospital cars was cobbled together for a week or two.

In 1982 the railroad contracted with GE in Hornell, NY to upgrade one train (ten cars) of the former UP equipment from steam to Head End Power (HEP). To facilitate this, eight stainless steel coaches were purchased from the Southern Railway in 1981 after it finally joined Amtrak in 1979. Two ex-Santa Fe diners were also acquired from Amtrak, also in 1981, to substitute for the cars sent out for upgrading and conversion to HEP. After the HEP cars returned for the 1983 season these other cars remained in the reserve fleet for cruise ship trains and other special trains such as the State Fair trains.

During this time the Alaska Railroad saw some administrative changes:

- The Department of the Interior had responsibility for the Alaska Railroad from its inception up until the Federal Government created a Department of Transportation in 1967 when the railroad was transferred to DOT.
- The Alaska Railroad celebrated the 50<sup>th</sup> Anniversary of the Golden Spike in Nenana on July 15, 1973.
- A bill to transfer the railroad to the State of Alaska was signed by President Reagan in 1983.
- In 1984 Governor Sheffield signed legislation to create the Alaska Railroad Corporation to be owned by the state with a seven-member board of directors.
- The railroad was purchased by the State of Alaska for \$22.3 million in January of 1985 (it is interesting to note that the cost to build the Alaska Railroad was \$35+ million back in the 1920's).

These years were good years for freight on the Alaska Railroad and the ridership on the passenger trains was growing as the hotel base in Denali Park started to expand outside the park entrance to facilities on the Parks Highway which had finally been opened through the Nenana River Canyon between Denali Park and Healy in 1972. Although this brought a bit more highway competition to The Alaska Railroad, it has, in the long run, been beneficial because of the relationship they have developed with the cruise companies. Westours (now Holland America) started bus service for their cruise patrons between Anchorage, Denali Park, and Fairbanks, however, the highway competition only mildly tempered the passenger growth on the railroad unlike for many other railroads where it decimated passenger volumes. The solution to the highway competition would arrive in 1984 when the first private luxury cars would start to be incorporated into the passenger trains. When these cars became available, the trains became "...the way..." to arrive or depart from the Denali park.

### **5) The Glory Years and the OX and the FOX**

Just prior to, and continuing after the State acquired the Alaska Railroad there was a move to modernize the locomotive fleet. The GP40-2s were just the beginning. In 1984 five brand new GP49s were acquired. These units had almost the same power rating as the GP40s, but were more fuel efficient using a smaller 12 cylinder engine. These locomotives were purchased in anticipation of coal export moves from Healy to Seward starting up. An additional four GP49s were acquired in 1985. These locomotives were unique to the Alaska Railroad, but were not well loved and the GP40-2s bought new by the ARR a decade earlier have outlived the GP49s which were all retired and sold around 2006.

Also in 1982 the railroad acquired five used former CR/PC/NYC GP40 locomotives to add to the fleet. Like the GP-49s these locomotives were also unloved by the crews. Their gearing was not the same as that in the ARR GP-40-2s and they often reacted differently to throttle settings and were more slippery than the GP-40-2s. There was no love lost when they left the fleet.

In 1986 the railroad acquired eight used GP38s. 2001 and 2002 were GP38-2s formerly from the Butte, Anaconda, and Pacific and were newer than the other six units which were of CR/PC heritage. Lastly the

railroad acquired four MP15AC units which were the first end cab switching locomotives since the Alco S2s. This gave the Alaska Railroad a pretty standardized fleet of 41 EMD 645-engined locomotives which led to the retirement of the F7s, the MRS1s and, eventually, the GP7s. The GP30 and 35s being a decade newer managed to hang on for another decade. All of the GP38s and the 15 GP40-2s bought new by the Alaska Railroad are still in service. Six of the GP40-2s were retrofitted with HEP generators at the rear for passenger and intermodal service in two different groups (3009-3011 and 3013-3015 – how 3012 escaped is a mystery).

The Seward Coal terminal was completed in November 1984 just before the railroad was purchased by the State. But most of the terminal's tonnage was transported during State ownership. It was not uncommon for the coal trains to make two roundtrips from Healy to Seward each week. This influx of coal export traffic helped the line from Portage to Seward hang on to what had been a rather fragile existence after the earthquake. The coal was the primary traffic that kept this line active until the summer passenger service generated by the cruise ships and the wilderness tours could begin to sustain operations.

Business was doing well. Local traffic was good, coal was moving from Healy north to the military bases, Fairbanks utilities and a powerplant at the University of Alaska. In the Anchorage area the summer gravel trains were rolling.

Starting in the spring of 1985 on six days of the week there would be two freight trains operating between Anchorage to Fairbanks. One was for daily general merchandise traffic. the second, a dedicated six day-a-week intermodal train, was tried in expectation of better, faster service to Fairbanks pulling traffic off the highway. The intermodal train was named the Arctic FOX (for Fairbanks Overnight eXpress). Customers were required to book space on the train and three slots could be reserved by customers for delivery to the Anchorage departure yard as late as fifteen minutes before departure. The train was aimed at attracting business from distribution warehouses in Anchorage that supplied customers in Fairbanks. When needed, it would be filled out with loads from TOTE and Sea-Land moving to Fairbanks. Train size was limited to thirty trailers (except during spring breakup when truck weight limits were imposed on the highways, the limit was raised to forty-five) and the train was shown in the timetable as a first class train with the same eleven hour schedule and rights as a passenger train. During the first year of operation it was only late into Fairbanks one time and had a fill rate on the trailer slots of 97%.

The merchandise train was called the OX or Oil-workers eXpress. Northbound it carried traffic to Fairbanks much of it bound for the oil fields of the North Slope. Southbound it moved the petroleum products, mostly jet fuel, from the refinery in Fairbanks to supply the burgeoning air cargo operations at the Anchorage airport.

Another new shipping company called SeaWay Express tried to enter the Alaskan market in 1984 with a triple deck RO-RO trailer barge from Seattle calling in Seward. The company even ordered, but never paid for a number of triple platform intermodal spine cars<sup>30</sup>. The company ended up at Seward because they were non-union and the Teamsters union in Anchorage protested their calling there<sup>31</sup>. But the overall Alaska Trade from the Continental US was down and the SeaWay express RO-RO service took twice as long as the TOTE service and only ran once a week. Upstart SeaWay Express went bankrupt in

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<sup>30</sup> These cars were eventually purchased by The Alaska Railroad to provide sufficient equipment to convert most of the intermodal moves to this type of equipment. The Fox and its southbound counterpart both operated with this type of equipment from their first day. All of this equipment still operates today.

<sup>31</sup> SeaWay actually reached a compromise agreement with the ILWU longshoremen in Seward.

1986. But it did fuel a boom in intermodal traffic for a few years generating the need to purchase up-to-date intermodal equipment for the railroad.

As northbound non-intermodal traffic declined, the Fox and the Ox were combined as a cost cutting measure resulting in the loss of much of the premium traffic on the FOX. However, it remained possible to fill the intermodal slots even though it was with less profitable traffic handled on behalf of TOTE and Sea-Land.

The passenger service started to grow. In 1984 Tour Alaska, founded by Tom Rader, started up a private railcar service with four refurbished former Milwaukee Road/Canadian National SuperDome cars<sup>32</sup>. The largest patron of this service was Princess Tours which soon acquired Tour Alaska. Princess Tours historically favoured rail unlike Holland America which moved most of their patrons by bus unless the customer specifically asked for rail. But in 1987 Holland America also saw the light and joined the private car family with a fleet of ten ex-Santa Fe full-length dome cars. Tailoring the passenger services around the cruise lines drove the annual passenger counts for the Alaska Railroad over 500,000 for the first time in 1996.

The legacy full domes were eventually all replaced with special bi-level cars; many with an open platform for picture taking and enjoying the views. These cars were built by Colorado Railcar which was also founded by Tom Rader. His cars are common on both The Alaska Railroad and Rocky Mountaineer Rail Tours based in Canada and a few in VIA Rail's Skeena between Prince Rupert and Jasper. Princess ordered their first Colorado Railcar Ultradomes in 1988. In 2001 Royal Celebrity purchased some Ultradomes and started operating cars on the ARR as well. Finally in 2003 Holland America realized their legacy domes were no longer the gold standard and started to replace them with Colorado Railcar Ultradomes in 2001. The Alaska Railroad decided to provide its own luxury class service and in 2005 started their Gold Star service also buying four Ultradomes. In total there are 28 Colorado Railcar Ultradomes built for service on the Alaska Railroad<sup>33</sup>. The Alaska Railroad also acquired the equipment from the ill-fated Florida Fun Train in 2000. These cars are single level full dome type cars. The Alaska Railroad rosters 8 of these cars, plus two former bi-level commuter cars converted to dining cars.

What truly sets the Alaska Railroad's approach to passenger service apart is the large private car fleet for the cruise ship operators. The private car fleet both gives the cruise ship companies a seat at the table to better control the on-board experience for their customer, and to develop transportation plans to move massive amounts of people efficiently, but also some long-term skin in the game with a significant investment in passenger rail. It creates a tight partnership between the railroad and the cruise lines.

Other changes to the passenger service came in 1986 when the Alaska Railroad purchased four Budd Rail Diesel Cars (RDC). They were tried on a variety of services, but are most remembered for their summer usage from Talkeetna to Hurricane for local service. This freed up the regular passenger train from having to do this flag stop work and allowed it to cater mostly to the Anchorage, Denali, Fairbanks tourism market. Eventually these cars were replaced by a train operated push/pull with a converted F40 cab car.

A Colorado Railcar bi-level DMU was purchased in 2009 to run trains into the Chugach National Forest. The car was not particularly reliable. The venture into DMU's may be what led to the collapse of Colorado Railcar. But the unique bi-level DMU on the Alaska Railroad, named the Chugach Explorer, is integrated with the Glacier Discovery train and serves as the cab car for push/pull operations.

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<sup>32</sup> Two additional cars were purchased by Rader to provide parts for the four working cars.

<sup>33</sup> Most of these cars started life as commuter coaches on the Southern Pacific that had operated between San Francisco and San Jose. The cars were completely disassembled and rebuilt as new equipment from the ground up.

In 1984 the Alaska Railroad realized the need to modernize their car fleet. One train set had been equipped with HEP in 1982, but a second trainset was never converted. The decision was made to acquire new cars built in Korea instead of rebuilding the older legacy former UP fleet. So eight new cars (six coaches and one café/lounge and one dining car) were acquired and the two other former UP domes were converted to HEP in the Anchorage shops.

Over the years the railroad also acquired a significant number of second hand cars, mostly specialized dome, dining, and a few baggage cars. Three of the legacy dome cars<sup>34</sup> have survived with the three remaining UP domes to provide six conventional dome coach cars for Alaska service.

The Whittier tunnel was converted to a unique joint rail and highway usage in 1999. The tunnel is narrow, only accommodating a single lane of cars (when a train is not using it, or course!). Traffic is held and operates in directional windows. Trains get their windows as well. However, this spelled the end of the Whittier shuttle service. In the summertime the Alaska Railroad still operates a Glacier Discovery train that goes to Whittier and other points. And it also operates cruise ship trains as needed for ships berthing in Whittier.

Infrastructure projects were started after State ownership. One of the first major projects was construction of a new headquarters building in 1992. Alaska Senator Ted Stevens was instrumental in getting Federal grant funding for numerous projects after the State acquired the railroad.

Lastly, the movie Runaway Train was filmed on the Alaska Railroad and was widely seen. Railfans knew where it was filmed. But for a variety of reasons the locomotives involved were disguised so they would not show as Alaska Railroad locomotives. It was kind of a last hurrah for the F7's which departed the state right after filming was complete.

## **6) The MAC years and the Passenger Golden Era**

The final chapter up to the Centennial is a story about dreaming, exploring a lot of options, focusing on efficiency, understanding what levers to pull and what grant money might help get the projects done. One of the most striking parts of this era, was the acquisition of a wonderful fleet of the most state of the art locomotives on the market. They improved operating efficiency enormously. These were the SD70MAC locomotives. The first high-horsepower, AC traction, six-axle locomotives on the Alaska Railroad. While the GP40-2s have been a steadfast feature of the Alaska Railroad fleet for what will soon be 40 years (a decade longer than the F7s and GP7s), high horsepower 4-axle locomotives are not exactly what most people in the railroad industry would call optimal locomotives for a railroad that is focused on heavy haul – at least on the freight side, and has relatively modest top speeds, some significant grades, especially on the Seward line but also over Broad Pass. But it was the curvature that largely made the Alaska Railroad a 4-axle railroad. The innovative radial truck design of the SD70MAC better enabled 6-axle power to work on the Alaska Railroad. AC traction also improves tractive effort, has better dynamic braking, and much higher traction motor resiliency, especially in dry snow conditions of the Alaskan winters.

The first 16 were delivered between 1999 and 2000. They kicked off the 21<sup>st</sup> Century for the Alaska Railroad and they did it in style. Eight more units were acquired in 2004 and the final four units in 2007 making a total fleet of twenty-eight locomotives. The final twelve, 4300 series units were equipped to handle passenger trains by cutting out two of the traction motors when in passenger service and routing that power to supply HEP to the passenger train. It still seems unusual to see 6-axle AC power in passenger service, but interestingly EMD has leveraged the Alaska Railroad design, and is currently

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<sup>34</sup> The three dome cars are all ex-Great Northern and Spokane, Portland and Seattle Empire Builder equipment. These domes were the only Budd built equipment on the Empire Builder.

converting seventeen second hand KCS SD70MACs to passenger locomotives for Chicago's Metra based on their design for the Alaska Railroad – although , for Metra, the two traction motors have been completely removed.

The locomotive roster has now been standardized to just three types of locomotives. The twenty-eight SD70MACs, fifteen GP40-2s and eight GP38s. The second hand GP40s, the MP15s, the GP49s, and the GP30 and 35 locomotives were all retired and sold, as were the last of the GP7s and the one remaining F7. Standardization can lead to efficiencies in part inventories, training and processes for maintaining and operating the railroad and the SD70MAC's must be significantly more fuel efficient for the railroad.

Back in 1964, the Alaska Railroad sold its last steam engine, an S-160 2-8-0 that had been built for the U.S. Army and transferred to the Alaska Railroad in 1944. It was purchased by Monte Holm, a scrap dealer (and railfan) from Moses Lake Washington. He kept the locomotive serviceable and ran it on some local track for many years. Monte Holm passed away in 2006. His family decided to sell 557 to Jim and Vicki Jansen in 2011. Jim is the owner and chairman of Lynden, Inc. a long-time logistic company serving Alaska, and the current partner to the Alaska Railroad on the railcar barge service from Seattle to Whittier. They donated the 557 to the Alaska Railroad with the proviso that they restore the locomotive to operation. Restoration work is being done by a non-profit, the Engine 557 Restoration Company, through grants and donations. Unfortunately the projected return to service date is 2024, just missing the Alaska Railroad Centennial celebration.

The Engine 557 Restoration Company has their facility in Wasilla adjacent to the railroad. About five miles farther down the track is the Museum of Alaska Transportation. The museum collection contains the first diesel owned by the Alaska Railroad, Alco RS1, number 1000 and F7 number 1500, the first F7 purchased by the Alaska Railroad. Several other Alaska Railroad F7s remain in service. FP7s 1510 and 1512 soldier on in tourist service at the Verde Canyon Railroad in Clarkdale, AZ. F7B 1503 operates on the Canyon City and Royal Gorge Railroad in Colorado. F7A 1508 operates on the Adirondack Scenic Railway based in Utica, NY. Wouldn't it be wonderful to assemble a working set of F7A/F7B/FP7 of Alaska Railroad heritage to support locomotive 557 with special train operations?

The 21<sup>st</sup> Century has presented challenges to the Alaska Railroad. But through strong focus and innovation they have adapted to meet the needs of the Railbelt economy.

The Alaska economy has historically been a roller coaster of boom-and-bust cycles. The Fairbanks refinery operations peaked in 2002, and then by 2014 had mostly shut down. Petro-Star still has a small refinery in operation in Fairbanks which ships some traffic to the Anchorage market and some petroleum products are flowing north again. There have been pushes to revitalize the north slope with new oil and gas leases, as well as the construction of a gas pipeline. Recently, the Federal Government approved a Conoco-Phillips application to develop a new field west of the current Prudhoe Bay operations that will require significant freight volumes to implement.

The export coal business has gone away with declining coal prices and a general shift away from coal as an energy source for power generation. The last vessel of coal to Asia departed Seward in July of 2016. The coal business from Healy to the northern military bases and Fairbanks holds on, but we have seen a significant drop in coal movement in the Continental US and it seems likely this, too will eventually happen in Alaska.

The third big hit to freight traffic was the cessation of CN Aqua Train service in 2021, after just shy of 60 years of service. The advantage of the Aqua Train was the shorter barge transit departing from Prince Rupert, BC which is only a few miles from Alaska's southern boundary.

At the time of the demise of Crowley’s Alaska Hydro-Train service in 2001 The Alaska Railroad in conjunction with Alaska Marine Lines (a subsidiary of the Lynden Companies which have been an long time legacy presence in the Alaskan market) began operation of a weekly barge service from Seattle to Whittier for both railcars and containers. The Alaska Marine Line service departs Seattle on Wednesdays and arrives in Whittier one week later. Both BNSF and UP interchange traffic to Alaska Marine Lines although Union Pacific actually does all of the barge switching in Seattle at Harbor Island. In 2006, well after the start of operations, Alaska Marine Lines patented and installed on the barges a rack to facilitate container loading above the railcars to boost the traffic handled both on the barges and on the railroad.

Below is a summary table of revenue and operating income for the 21<sup>st</sup> century:

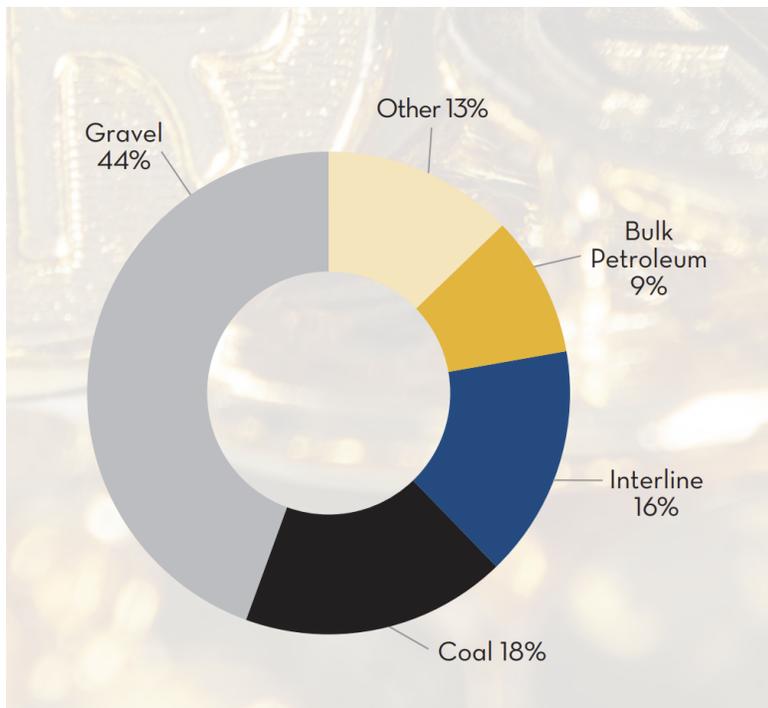
(in millions of \$)	2002	2012	2022
Freight revenue	76.0	100.0	110.1
Passenger revenue	14.0	24.0	45.0
Other rail revenue	0.5	4.0	.5
Grants	3.9	40.4	67.9
Op. Income	2.1	3.8	21.2
Net Real Estate Income	7.8	10.1	17.0

Passenger revenue has tripled and the railroad is now operating regular passenger service in the summer over its entire mainline network and on its Anchorage International Airport branch. One of the most popular trains is the Coastal Classic making a daily roundtrip to Seward from Anchorage with a significant, 6.5 hour, layover in Seward to enjoy tours and activities in the area. The line to Seward is often considered the most scenic on the railroad and features views of Spencer Glacier. The line to Seward just keeps coming back!

Real Estate revenue has also more than doubled

The increase in grant money for the railroad is evident here as well. This provides much of the funding for infrastructure projects including Positive Train Control which is required where the railroad has passenger operations. The grant money is a mixture of State and Federal funds.

The split of the 2022 freight revenue by broad commodity group looks like this:



In 2022, gravel accounted for 44% of freight revenue, coal was 18%, bulk petroleum products was 9%, interline revenue (railcar barge traffic) was 16% and other (other local freight like intermodal, imported cement, etc) was 13%. Splits were not available from 2002 and 2012 in the Alaska Railroad reports.

This is a rather unusual mix of traffic for a railroad of this size and it highlights the growing importance of the aggregates traffic. There are two active gravel loadouts on the railroad – they are Quality Asphalt Paving a subsidiary of Colas (QAP) at Kashwitna (north of Willow), and Anchorage Sand and Gravel (AS&G) on the Palmer spur. Both companies have their unloading terminals in South Anchorage.

The SD70MAC's are Distributed Power Unit (DPU) capable. This is very valuable for the gravel trains as they can operate with one locomotive on each end in a push-pull configuration. This simplifies operations in not having to turn the trains or run around them with the locomotives at each end of the run.. They can pull into the load out sidings, the crew changes ends and they can load/unload the trains and be back on the road again. The gravel trains are a true model of Alaska Railroad operating efficiency. The train sets can cycle twice a day if needed to move over two million tons of aggregates in a six-month season. Both AS&G and QAP have a significant presence in the Fairbanks area so hopefully, someday, there will be aggregate trains serving the Fairbanks market as well.

Both the passenger service and the gravel service are very seasonal. Summertime is definitely the peak season on the Alaska Railroad. Summertime is also track work season as it is on most railroads. Work trains moving ties, rail, ballast and fill material add to the peak season buzz. This poses challenges in having to have much more equipment (locomotives and cars) available during the summer that are not used much in the winter.

The following map from a September 2018 PTC update presentation by the Alaska Railroad shows the extent of the passenger operations and the freight tonnage levels over the line. The Alaska Railroad as part of its PTC implementation now uses Centralized Traffic Control (CTC) from Kashwitna (the northern most gravel load out) to South Anchorage<sup>35</sup>. The track from Portage to Whittier is also CTC and there are

<sup>35</sup> The map incorrectly shows Pittman as the location of the gravel quarry served by ARR.

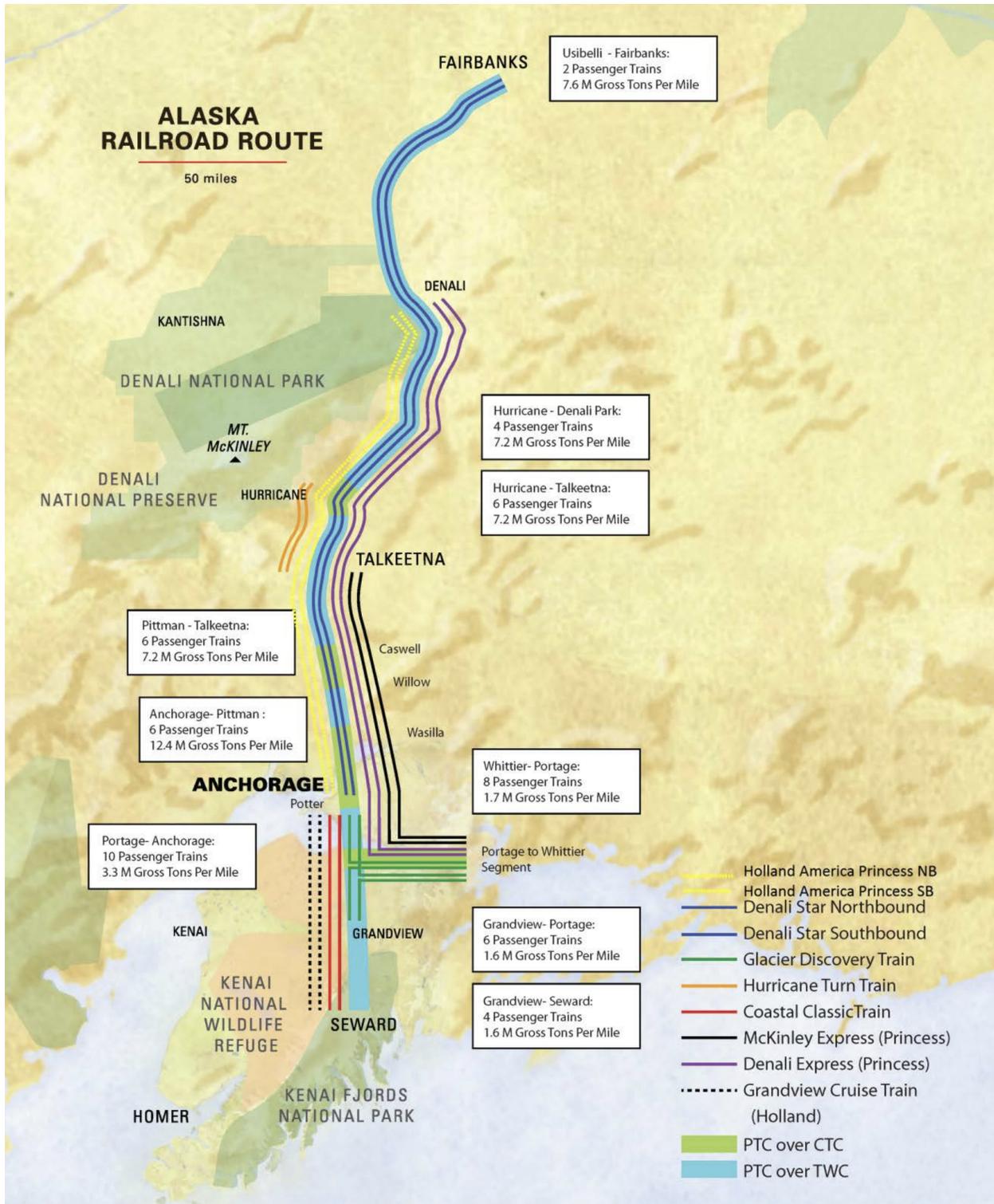
two CTC islands where planned train meets are supposed to be executed. These CTC islands improve efficiency for trains. The rest of the line is Track Warrant Control (TWC). PTC was fully implemented on the Alaska Railroad by the end of 2020.

The map also shows more passenger trains in the legend than the caption boxes show. It appears that the Holland American NB and SB trains were added later, but the boxes were not updated. The schedules for the cruise ships trains are not shown on the railroad's website as they are private trains so I cannot verify their frequency of operation, but they may not operate daily and the numbers shown may be average daily numbers.

Current freight train schedules show service from Anchorage to Fairbanks as running five times a week (Su, M, T, W, and F) and southbound (Su, M, T, W, Sa).

The 21<sup>st</sup> Century has been a time of evolution for the Alaska Railroad. There has been a significant number of infrastructure upgrade (in addition to the installation of CTC and PTC), in the 21<sup>st</sup> Century. Some of the projects that have been completed so far include:

- Anchorage double track and CTC installation between 2001-2003 to help ease congestion in the Anchorage terminal area during the peak summer season.
- Track realignment between Anchorage and Wasilla to reduce curvature and increase speeds. This work was done between 1999 and 2007 and cut 30 minutes off the travel time between Wasilla and Anchorage.
- A new passenger terminal was built at the Anchorage International Airport. Currently it primarily serves cruise ship passengers between the ships and the airport, but has potential for other traffic in the future.
- A new passenger depot area at Denali Park was constructed in 2003
- A new passenger station was built in Fairbanks in 2005
- A new operations center in Anchorage was opened in 2005 to replace the old yard office building.
- In 2005 the Garner tunnel in the Nenana Canyon between Denali Park and Healy was bypassed. The Moody tunnel also in the Canyon had a partial collapse in 2005, this led to a project in 2008 and 2009 to completely daylight the Moody tunnel. Other improvements have also been made to the Nenana Canyon, such as new retaining walls for this notoriously unstable, yet scenic part of the railroad.



Many other projects are on the drawing board awaiting approvals and funding sources. These include:

- Potential commuter service between the Matanuska-Susitna Valley and Anchorage and on to the Anchorage airport.
- The creation of a Ship Creek Intermodal Transportation Center for passengers, offering better pedestrian connections to downtown and more station capacity and parking.
- Line relocation around downtown Nenana
- Line relocation around Fairbanks
- The Port MacKenzie rail line extension. Just across Cook inlet from Anchorage is Port MacKenzie. A 32 mile rail extension from just north of Wasilla would extend down to Port MacKenzie. Nearly 25 miles of the 32 miles of the right of way has been constructed. There is a 7 mile gap in the middle of the line that has not been completed. No rail has been laid. The project work so far was completed between 2012 and 2016. The line would provide a much shorter and easier route to tidewater for bulk traffic to from Alaskan Interior. It would have provided a much more efficient route for the export of Alaskan coal, but that proverbial ship has likely sailed. The State of Alaska also proposed a bridge between Port MacKenzie and Anchorage (some plans have a rail track, some are just highway). With more land available than in Anchorage there is a vision that someday this could become the new Port of Alaska. The question is when?
- Replacing the existing Seward dock which is now about 60 years old (post-earthquake) and is starting to deteriorate. Another part of this project is the construction of a new cruise ship terminal at the dock. The dock can and does handle freight traffic in the off-season. This project is supposed to begin this year.
- And finally, there is a proposal called A2A (Alberta to Alaska) project connecting the Alaska Railroad to the rest of the North American network. The first phase of this is to extend the railroad southeast to Delta Junction which was identified as a potential barley farming area. The first phase, a bridge over the Tanana River at Salcha was completed in 2014. There are no tracks on the bridge, but the military uses it to move tanks and equipment to training areas across the river.

The 21<sup>st</sup> Century has been a time of challenges for the Alaska Railroad. Some key business elements have dropped off, and the pandemic had a huge impact on the passenger business for a couple of years. But the railroad continues to be a growing lynchpin in the tourism business in Alaska, and they have also become a key link in the construction trade in the Anchorage area. The seasonality of both lines of businesses does pose a challenge for the railroad. The passenger business has been growing a bit in the winter, but is still a tiny fraction of the summer business. Commuter service between the Mat-Su Valley and Anchorage and the Anchorage airport would provide some additional all year around business.

The Alaska Railroad intermodal service operates between Anchorage and Fairbanks for all types of truck traffic. The distance is just over 350 miles, it is about the same distance as the Florida East Coast Railroad between Miami and Jacksonville. The truck trade in Alaska, like Florida, is largely loads in and empties out, which can create somewhat challenging economics for trucking. The Alaska Railroad may even have one advantage over the FEC in that nearly all of the intermodal traffic originates at the port of Anchorage and in Whittier so origin drayage costs are minimal. But Alaska has only a fraction of the population of South Florida and that presents the biggest challenge to growth. The infrastructure has improved enough that a single crew now makes the entire run between Anchorage and Fairbanks for all train types. And maybe the Alaska Railroad could start up aggregates service into the Fairbanks market? Passenger, intermodal, and aggregates – are these the leverage points for the next chapter of the Alaska Railroad?

There is not yet a clear view as to what the next business boom for Alaska may be or where it will occur. It could be a gas pipeline or expansion of the North Slope oil fields. Alternatively, it could be some new mineral mining project. There has been on and off talk of agriculture and forest products in the interior, but that discussion has been going on for years with no results.

Whatever the future holds, it seems The Alaska Railroad is well positioned to handle it. The railroad and its fleet of SD70MAC's are quite efficient. The addition of powered switches at key locations is making train operations smoother and faster. The railroad seems to have a really good mix of infrastructure and equipment to make the most of their business opportunities. The railroad is well advanced on planning for key infrastructure projects to support whatever comes their way. So far the railroad seems to have pretty good support from the Alaska Legislature and a good line to Federal grant money as well. It seems that the Alaska Railroad is well positioned to be able to deftly adapt to any turns in the economy. After all, the Alaska Railroad has conquered many challenges, lots of miles of track, low population density, and a lack of heavy industry or substantive mineral developments online. It has partnered to develop a rail connection (by barge to the Continental U.S. and those barges now have two levels for railcars and containers. The Alaska Railroad has also managed to innovate and create workable business models around traffic other railroads would not have given much consideration – aggregates, passengers, and short-haul intermodal.

***Congratulations to the Alaska Railroad on its first one hundred years! Here's to hundreds more!***

#### **About the authors:**

##### **Jason Kuehn**

The Alaska Railroad golden spike centennial is personally important to me. I arrived in Denali Park as a 13-year old in 1973 just in time to start high school in Healy. My dad, as the Superintendent of Denali

Park, received a commemorative plaque from the Alaska Railroad for this event which I still have 50 years later. The Alaska Railroad was the first railroad I got to know well from my time in Denali Park and later going to college in Fairbanks and working in Denali Park during the summers. I got to meet Bill Dorcy, the general manager for a breakfast with my dad on his business car (Glacier Park at that time). He arranged a shop tour for me in the summer of 1976 and I got to ride the freight train home to Denali from Anchorage, with a meal stop at Curry!

During my freshman year calculus class at the University of Alaska, Fairbanks, the classroom had a view of the University Avenue grade crossing and the northbound freight from Anchorage often arrived sometime during class and provided a nice distraction. For my final three years of college at UAF, my dorm room had a view of the mainline going past the campus (and Mt. McKinley on clear days) and I often watched the local coal train that ran to Healy and back go by.

All through high school and college I worked in Denali Park for Westours and for the hotel. After college, I worked through December for the hotel company until I was laid off at the end of the year. Then I had the great fortune to work for Senate President Jay Kerttula, and he finding out about my interest in the Alaska Railroad, assigned me to work on the legislation transferring the Alaska Railroad to the State during the 1983 session. I went on to graduate school and came back in the summer of 1984 to work as a summer intern in the marketing department for John Gray. This was the only time I actually worked for the Alaska Railroad. But the Alaska Railroad launched what has become a 38-year career in the railroad industry and will always hold a dear spot in my heart.

### **John Gray**

I grew up on The Alaska Railroad. My father took a job with ARR in 1953 doing work that was part of the post-war rehabilitation. At age four, my first home in Alaska was in Cantwell. Early in the winter that year we moved to Whittier and lived there until 1958 when another job took us to Portage (yes, there was an actual town in Portage back then). From then until late 1963 my father's job took us to Anchorage, Healy (twice), Nenana, Fairbanks (twice), Hurricane, back to Portage, Tunnel and finally back to Anchorage where we stayed until I graduated from High School in 1967.

University was in the states from 1967 through 1972 to get two degrees in engineering but back to Alaska each summer with the Army Corps of Engineers working in the field all over the state from Amchitka in the Aleutians to Ketchikan in the Southeast, out to the Bering Sea coast and between Fairbanks and Haines (wonderful summers). After that, four years in the Army in Germany (spending a lot of time with German and Swiss railroads) until 1976. Then two years of grad school in mathematical modelling and finally back to Anchorage where I took a faculty job with the University of Alaska-Fairbanks. Was there for 2-½ years working on transportation policy issues for the state (including the acquisition of ARR by the state and rural air service) and then to work at The Alaska Railroad until 1987.

Came back to the states to work at Burlington Northern Railroad in Fort Worth; from there to Denver to work for Southern Pacific/Rio Grande and then after Union Pacific bought SP/DRGW, to Omaha. Was there until 2008 when we moved to Washington to work for The Association of American Railroads. So - started in the industry at "ARR", will end my railroad time at "AAR". I'm a railroad person, always have been, always will be; and Alaska and The Alaska Railroad will always be my home.

### **About the paper**

John Gray and Jason Kuehn are considering publishing this as a book – The Centennial History of the Alaska Railroad. We would be interested in your thoughts. And we would be interested in collaborating with some of you reading this to help us illustrate it with your photographs (credited of course). Our

thought is to develop the book and donate any profits from the sales to the restoration and operation of 557.

Please send your thoughts, comments, or corrections, to [jdkuehn@hotmail.com](mailto:jdkuehn@hotmail.com) and please include Centennial History of the ARR in the subject line.