

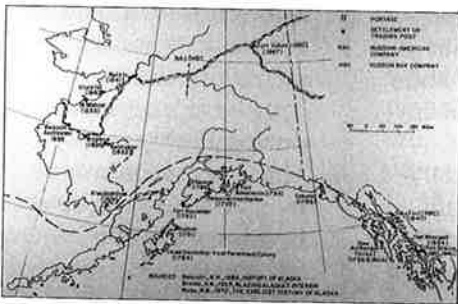
Alaska's Transportation Dilemma

by Edwin M. Rhoads

Alaska's transportation network evolved primarily from the development of natural resources, and secondarily from socio-political factors. This article highlights that evolution and presents the prospects for the future of the system.

The Gold Rush Era: 1867-1914

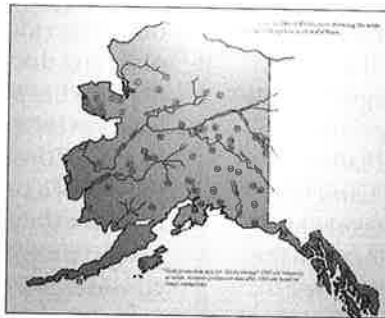
During the Russian occupation, the fur trade was the basic commercial activity of the Russian-American Company and the British Hudson Bay Company, both using natural waterways primarily (Fig. 1).



(Fig. 1)

At the time of the Alaska Purchase, the march of the gold seekers had advanced northward from California and the Rockies into British Columbia, and soon entered the Alaskan Panhandle. Placer mining and salmon fishing overtook the fur trade, the former spreading over a wide area of the territory (Fig. 2).

In southeast Alaska, placer mining was supported by salt-water ports; in the interior, by river steamboat augmented by a network of pack, sled and wagon roads. The Klondike strike in Yukon Territory led to the Railroad Act



(Fig. 2)

of 1898, bringing Alaska belatedly into the age of the "Iron Horse" (WP&YR, 1898; Seward Peninsula Railroad, 1900; Tanana Valley Railroad, 1905; CR&NW, 1911; Alaska Railroad begun 1914).

The U.S. Army and U.S. Geological Survey explored routes for an "all-American" access to the Yukon River, and the Alaska Road Commission, established in 1905, began energetically to build trails and wagon roads. By 1914, some 10,000 miles of roads and trails had been completed (Fig. 3).

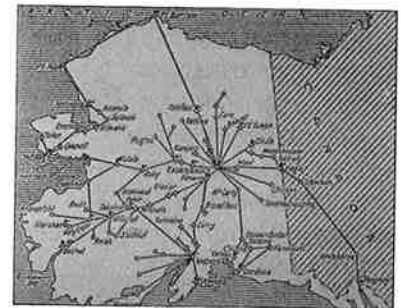


(Fig. 3)

The Mechanized Era: 1914-1940

The advent of gasoline-powered vehicles and aircraft led to the upgrading

of wagon roads and the construction of airfields, eliminating much of the trail network (Fig. 4). The Alaska Railroad was completed in 1923, and CR&NW Railroad closed in 1938 due to depletion of the mines at Kennicott. By 1940, there were 160 airfields in Alaska, 500 miles of rail, about 2,700 miles of sled roads and permanent trails, but less than 2,000 miles of roads.



(Fig. 4)

World War II to Statehood: 1940-1959

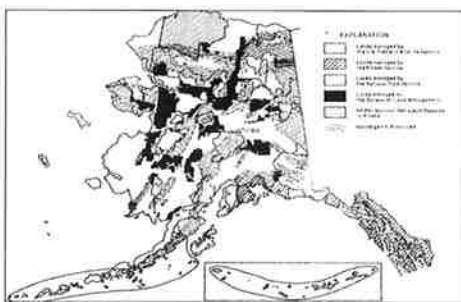
World War II and its aftermath brought a major surge in construction. A number of military airfields were built, the Alcan Highway was punched through, a new port at Whittier was connected to the Alaska Railroad by a tunnel, and Anchorage was connected to the Alcan by the Tok Cutoff and the Glenn Highway. Construction continued as the "cold war" began, including upgrading of the Alcan, Tok Cutoff and Glenn Highway.

The Taylor Highway to Eagle and Dawson in Yukon Territory, a road from Haines north to the Alcan, the De-

nal Highway, and roads in the Seward and Kenai Peninsula were added to the system. The Copper River Highway to Cordova was begun, but remains unfinished today. The Federal Aid Act of 1956 extended Federal Aid for highways to Alaska for the first time, with Federal-to-Territorial matching ratio of 90 percent to 10 percent. Prior to statehood, the road system totaled about 5,200 miles, of which 3,600 miles comprised the primary and secondary network, and the remainder local roads.

The State of Alaska: 1959-1994

The new state, granted 104 million acres of land under the statehood charter, actively began to expand the road network to provide access to natural resources. In 1962, the transition from territorial to state government was completed, a department of highways established, and by the following year 225 miles of pioneer access roads were completed. Although gold mining declined due to rising production costs against a government-fixed price, private exploration for other minerals increased dramatically in the 1960s, and extensive plans for roads and rail routes into these areas were developed. The Prudhoe Bay discovery changed dramatically the state government's focus from minerals to oil, and the Alaska Native Claims Settlement Act (ANCSA) of 1971 resulted in the granting of 40 million acres to Alaska's natives and the withdrawal of 140 million acres to mineral development (Fig. 5). In 1947, the Alaska Department of Highways prepared a 20-year plan to link the more remote population centers with the rest of the state, which was followed by a Bureau of Land Management plan for multi-modal corridors to



(Fig. 5)

areas of natural resource development potential. The administration of Governor Jay Hammond (1974-1980) took no action on these plans, and concentrated on the access to Prudhoe Bay and improvement of the existing transportation system. As a result, the major increments to the road net to date are the Dalton Highway to Prudhoe and the Parks Highway paralleling the Alaska Railroad (Fig. 6). The state's primary and secondary road system at this time comprises 5,600 miles, half the network of the 1920s.

The Future

Alaska faces a major dilemma. The production of Prudhoe Bay, from which the state derives 85 percent of its revenues, is declining, while the population continues to increase. The need to diversify Alaska's economic base is urgent. In 1992, the state faced a deadline to complete the selection of its 104 million acres, in which process consid-



(Fig. 6)

eration was given to corridor areas of known resource potential. The trunk connector and spur routes included in this plan could add a possible 11,500 miles to the present land transportation system.



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(Fig. 7)

Major trunk routes recommended in the plan are shown in (Fig. 7). The lands selected for the western routes may be approved but access to world-class mineral deposits in the Brooks Range and huge coal deposits on the North Slope are a major problem. Much of this area is precluded from access, and although the Alaska Natural Interest Lands Act of 1980, and subsequent fed-

eral legislation, specifically declared that a route through the Gates of the Arctic National Preserve is in the national interest, the state, in establishing the Alaska Railroad Corporation in 1884, denied a rail route to this area. A road is still possible over the route selected, and the legislature has passed an act authorizing a survey of such a route.

The alignment of this segment is suitable for construction of a railroad, which would be essential for economically feasible extraction of minerals from the ore deposits in the Kobuk region. Unfortunately, the same legislature did not authorize the funding for such a survey. It will take the type of positive action by the administration and the legislature demonstrated by that shown in the early days of statehood to develop a transportation system capable of supporting the vigorous and diversified economy essential for the future welfare of the state and its

people. While the construction of any new route should not be undertaken unless the state can be reasonably assured of a positive rate of return in either fiscal or social returns on the investment, action should be taken now to survey and acquire rights of way for the major trunk routes identified.

Such action would send a positive message to the private sector, encouraging industries to consider the feasibility of developing new remote resources, given the assurance that adequate transportation could become available. This would be a small price to pay for the potential rewards to Alaska. □

On graduation from the U.S. Military Academy in 1943, Edwin M. "Rocky" Rhoads was commissioned in the cavalry. He retired from the Army with the rank of colonel in 1971. Mr. Rhoads received a doctorate from the University of Alaska in Fairbanks. Currently, he is a consultant in transportation planning.

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