

BOARD OF ROAD COMMISSIONERS FOR ALASKA

1931

in

REPORT OF CHIEF OF ENGINEERS, U. S. ARMY, 1931

Fiscal year ending June 30	1927	1928	1929	1930	1931
Cost of new work		\$46,992.58	\$2,723.00	\$15,944.50	—0.26
Cost of maintenance					
Total cost		46,992.58	2,723.00	15,944.50	—0.26
Total expended	\$48,133.88	50,465.25	2,847.10	15,116.38	874.36
Allotted	50,000.00	49,000.00	15,932.92	0.00	—0.26
Balance unexpended July 1, 1930					\$883.62
Amount to be accounted for					883.62
Deductions on account of unexpended balance returned					5.26
Net amount to be accounted for					874.36
Gross amount expended				\$874.36	
Less receipts from sales				0.00	
					874.36
Balance unexpended June 30, 1931					0.00
Outstanding liabilities June 30, 1931				0.00	
Amount covered by uncompleted contracts				0.00	
Balance available June 30, 1931					0.00
Accounts receivable June 30, 1931					0.00
Unobligated balance available June 30, 1931					0.00
Amount (estimated) required to be appropriated for completion of existing project					0.00
Amount that can be profitably expended in fiscal year ending June 30, 1933:					
For new work					0.00
For maintenance					0.00
Total					0.00

Note—The above cost and financial summary includes the work done with \$10,000 allotted from War Department appropriation of February 12, 1925, "Maintenance and improvement of existing river and harbor works," for investigation of Rainy Lake watershed.

## BOARD OF ROAD COMMISSIONERS FOR ALASKA

## OFFICERS OF THE BOARD

President: Maj. Malcolm Elliott, Corps of Engineers, United States Army.

Engineer officer: Maj. Layson E. Atkins, Corps of Engineers, United States Army.

Secretary and disbursing officer: First Lieut. James G. Christiansen, Corps of Engineers, United States Army, to July 31, 1930; First Lieut. Raymond B. Oxrieder, Corps of Engineers, United States Army, August 1, 1930, to January 31, 1931; and First Lieut. Leland B. Kuhre, Corps of Engineers, United States Army, February 1, 1931, to date.

Military assistants, under the immediate orders of the president of the board: First Lieut. James G. Christiansen to November 3, 1930; First Lieut. Raymond B. Oxrieder to July 31, 1930, and from February 1, 1931, to date; First Lieut. Leland B. Kuhre to Jan-

uary 31, 1931; First Lieut. Albert H. Burton, Corps of Engineers, United States Army, July 20, 1930, to date; and First Lieut. Walter W. Hodge, Corps of Engineers, United States Army, November 5, 1930, to date.

*Organization and duties.*—The board was constituted by an act of Congress approved January 27, 1905, and its duties are defined in that act as amended by Congress January 27, 1905, May 14, 1906, and March 3, 1913. The law prescribes that the board shall consist of three members, one of whom shall be an Engineer officer, and the others officers of that part of the Army stationed in said district.

The board has the power and the duty, upon its own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters in the District of Alaska to any town, mining or other industrial camp or settlement, or between any such towns, camps, or settlements therein, if in its judgment such roads or trails are needed and will be of permanent value for the development of the district.

The money therefor is derived, in part, from congressional appropriations and in part from the Alaska fund made up of moneys collected for occupation or trade license outside of the incorporated towns in the Territory, 65 per cent of which fund is devoted to the construction and maintenance of wagon roads, bridges, and trails in the said Territory.

The substance of the laws governing the operations of the board is printed on pages 2144 and 2145 of the Annual Report of the Chief of Engineers for 1929. The following act of Congress, approved May 15, 1930 (Pub. No. 228, 71st Cong.), provides for a study regarding the construction of a highway from the United States to Alaska:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President of the United States is hereby authorized to designate three special commissioners to cooperate with representatives of the Dominion of Canada in a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska, with a view to ascertaining whether such a highway is feasible and economically practicable. Upon completion of such study the results shall be reported to Congress.

Sec. 2. The sum of \$10,000 is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the purposes of carrying out the provisions of this Act.

The president of the board was appointed by the President, July 28, 1930, as a special commissioner for the purpose designated in the foregoing act.

*Offices of the board.*—The principal office of the board is at Juneau, Alaska. Suboffices are maintained, when required by active operations, at Valdez, Chitina, Fairbanks, Eagle, Anchorage, Seward, Takotna, and Nome, Alaska; Seattle, Wash.; and Washington, D. C.

*Location and description.*—The work thus far accomplished includes the construction of 1,664 $\frac{1}{2}$  miles of wagon road, 87 miles of tramroad, 1,399 $\frac{1}{4}$  miles of sled road, 7,326 miles of permanent trail, and 712 miles of temporary, slagged trail, a total of 11,189 miles.

The Territory has an area of 590,880 square miles, which is more than twelve times the size of the State of New York, or practically one-fifth the size of the United States proper. At its southern

point it is 700 miles from the northwest point of the State of Washington by the usually traveled route. Thence the southeastern Alaska Archipelago and a strip of mainland lying west of the Canadian boundary extend northwesterly for about 520 miles to the major portion of the Territory, which lies west of the one hundred and forty-first meridian and has a dimension of approximately 900 miles north and south and 700 miles east and west, with the Alaska Peninsula and Aleutian Islands reaching out from the southwestern portion nearly 2,500 miles toward Siberia.

The topography of Alaska varies from rolling to extremely rugged, with little level area. The seaward slope, as far west as Cook Inlet, is especially rugged and subject to a heavy rain and snow fall.

The timber along the coast attains a dense growth, but in the interior is found only along the stream valleys. Spruce and hemlock form the greatest part of the timber on the coast. Hemlock is not found in the interior.

On the north slope of the Alaska range and on interior river valleys considerable areas are found frozen permanently to bedrock. The climate and topography throughout are such that in the summer time passage overland is difficult. On the seaward slope the heavy rainfall upon the blanket of decayed vegetation creates a footing almost impassable. In the interior the surface thawing of the bed of frozen material makes a widespread and difficult morass.

*Original condition.*—Prior to the organization of the Board of Road Commissioners for Alaska there were in the whole of the Territory less than a dozen miles of what might be called wagon road, with a few hundred miles of pioneer trail, mostly constructed by expeditions under the War Department. Travel was largely confined to the open waterways in summer and to their frozen courses overland in winter. When mining machinery and other supplies were to be transported from the coast or river landing they were in most cases hauled over the snow during the winter, with some preliminary clearing of the route when necessary. Travel across country in summer, generally speaking, was possible only on foot or with pack horses. It was difficult always, and frequently dangerous, on account of the numerous swift and deep streams, fed by the ice-cold and silt-laden waters of mountain glaciers.

*Previous projects.*—See description in Annual Report of the Chief of Engineers for 1923, beginning on page 2086. A new program of operations was recommended in the Annual Report of the Chief of Engineers, 1920, pages 61 to 65. The amounts expended on previous projects prior to June 30, 1921, were \$3,727,249.69 for new work and \$2,276,812.27 for maintenance, a total of \$6,004,061.96.

*Existing project.*—A new program of operations, prepared by the board of road commissioners in cooperation with the Governor of Alaska, the Territorial Road Commission, and other interested Federal and Territorial officials, was submitted in the annual report of the board for 1920. It proposes three classes of work: First, the construction of about 700 miles of arterial or feeder highways, mainly following old routes (estimated cost, \$7,000,000); second, the construction of development roads to be constructed from time to time on locations left for future determination (estimated cost \$1,000,000); third, the maintenance of existing road and trail system (estimated

cost for the 10-year period, \$2,000,000). Total estimated cost, \$10,000,000.

The total appropriations for the first five years were less than half the estimates, and about three-fourths of the available funds were required for maintenance and repair. Construction should be speeded up so as to get the maximum benefit from the work already accomplished, and the 1920 program was, therefore, revised in 1924. The appropriations recommended for the second five years of the 10-year period are as follows:

(a) For maintenance and improvement of existing routes to the same standard throughout, 9,736 miles, at \$870,000 per year.....	\$4,350,000
(b) For completion of projects already undertaken.....	1,735,000
(c) For completion of projects already approved but not yet undertaken.....	1,730,000
(d) For completion of projects likely to arise with development during the 5 years.....	1,185,000
<b>Total for 5 years.....</b>	<b>9,000,000</b>

Federal appropriations required each year of 5-year period of road and trail development

PROGRAM FOR 1924

Fiscal year	Working season	(a) Maintenance existing routes	(b) Completion, approved projects already under way	(c) Construction, approved projects not yet under way	(d) Construction, new projects likely to develop	Total estimated	Amount actually appropriated
1927.....	1925	\$350,000	\$510,000	\$200,000	.....	\$1,150,000	\$900,000
1928.....	1927	360,000	475,000	575,000	\$100,000	2,000,000	1,000,000
1929.....	1928	350,000	400,000	520,000	200,000	2,000,000	825,000
1930.....	1929	350,000	350,000	300,000	1,250,000	2,000,000	800,000
1931.....	1930	360,000	100,000	65,000	455,000	1,000,000	800,000
1932.....	1931	.....	.....	.....	.....	.....	800,000
<b>Total.....</b>		<b>4,360,000</b>	<b>1,735,000</b>	<b>1,780,000</b>	<b>1,185,000</b>	<b>9,000,000</b>	<b>6,125,000</b>

A new 10-year program to continue the work beginning with fiscal year 1932 has been submitted. It provides for maintenance and improvement of the existing system and for needed new construction to keep pace with the development of the territory.

The appropriations recommended for each year of this 10-year period are as follows:

PROGRAM FOR 1920

Fiscal year	Working season	For maintenance and improvements	For new construction	Total for maintenance, improvement, and new construction	Estimated receipts from Alaskan sources			Federal appropriations required
					Alaska fund	Territorial appropriations	Total from Alaska	
1932.....	1931	\$360,000	\$400,000	\$1,286,000	\$100,000	\$100,000	\$200,000	\$1,086,000
1933.....	1932	371,000	300,000	1,471,000	100,000	100,000	200,000	1,271,000
1934.....	1933	360,000	300,000	1,708,000	100,000	100,000	200,000	1,508,000
1935.....	1934	350,000	300,000	1,758,000	100,000	100,000	200,000	1,558,000
1936.....	1935	341,000	300,000	1,791,000	100,000	100,000	200,000	1,591,000
1937.....	1936	332,000	1,000,000	1,882,000	100,000	100,000	200,000	1,682,000
1938.....	1937	323,000	300,000	1,818,000	100,000	100,000	200,000	1,618,000
1939.....	1938	314,000	300,000	1,854,000	100,000	100,000	200,000	1,654,000
1940.....	1939	305,000	300,000	1,890,000	100,000	100,000	200,000	1,690,000
1941.....	1940	296,000	300,000	1,926,000	100,000	100,000	200,000	1,726,000
<b>Total.....</b>		<b>9,017,000</b>	<b>7,500,000</b>	<b>10,517,000</b>	<b>1,300,000</b>	<b>1,000,000</b>	<b>2,300,000</b>	<b>14,217,000</b>

For latest published maps see map following page 89, Part II, of the Annual Report of the Alaska Road Commission, fiscal year 1930, and also a wall map of Alaska published by the board of road commissioners, 1923.

*Recommended modifications of project.*—None.

*References to published articles not previously reported.*—None.

*Local cooperation.*—For description of development of local cooperation, authorized by the act of June 30, 1921, previously quoted, see Annual Report of the Chief of Engineers for 1924, beginning on page 2071.

During the fiscal year the board has expended directly \$10,422.16 for shelter cabins, \$95,758.41 for roads, \$25,219.45 for aviation fields, \$7,733.88 for the Valdez Dike, \$220 for marking Gastineau Channel Bar, Yukon-Kuskokwim Portage \$500, and \$5,452.64 for telephone lines from funds contributed by the Territory, and \$20,298.32 contributed by others.

For the working season of 1931 the Territorial board has allotted to the Department of Agriculture \$10,000 and to the Federal board the following amounts:

Cooperative road projects	\$77,830
Territorial road projects	18,300
Shelter cabins	3,650
Aviation fields	12,450
Telephone lines	3,100
Nome Harbor	2,500
Valdez Dike	15,000
Iditarod River	5,000
Total	137,330

These funds are held subject to the call of the Federal board.

Cooperation with the Territory has been continued in connection with the purchase, rehabilitation, and operations of two tramroads, one extending from Nome to Shelton on the Seward Peninsula, a distance of about 74 miles, and the other situated in the Tolovana district, about 50 miles northwesterly from Fairbanks and extending from the town of Brooks about 13 miles southerly to the head of navigation on the Tolovana River.

The Nome-Shelton tramroad was purchased on October 3, 1922, for \$24,014. During the fiscal year \$11,671.40 was spent on its maintenance.

The Tolovana tramroad was purchased on June 11, 1924, for \$6,425. During the fiscal year \$6,314.23 was spent on its rehabilitation and maintenance.

During the year the board assumed responsibility for the construction and maintenance of 36 aviation fields and the repair and maintenance of 736 miles of telephone lines for the Territory.

The general road and trail system of the board ties into the Alaska Railroad, operated by the Secretary of the Interior, at 27 different stations. These highway and trail feeders to the Government railroad are an important factor in increasing business for the railroad, and thereby reducing its present operating deficit.

Since April 1, 1922, the board, under an agreement with the Secretary of the Interior, has handled road and trail work in the Territory for the National Park Service, including the construction and

maintenance of the Mount McKinley National Park Highway, authorized by the act of Congress approved April 9, 1924.

*Consolidation of road work under the board.*—From the foregoing it will be noted that all road and trail work in the Territory of Alaska, including work supported by appropriations of the Territory, of the War Department, and of the Department of the Interior, but excluding the former projects of the board in the national forests now supported by appropriations of the Department of Agriculture, is consolidated under the direction of the board.

*Effect of improvement.*—The roads and trails constructed by the board have not only opened up to development nearly all sections of the Territory but have effected large savings in freight charges. The major portion of this freight would not have been transported without the roads, and the indirect loss that would have been occasioned by the restriction on output and development if the roads did not exist can not be estimated.

The use of automobiles is increasing rapidly. Approximately 90 per cent of the traffic on the main wagon roads is handled by motor, which has greatly increased the cost of road maintenance. The use of tractors for drawing freight, particularly on the sled roads of the interior, is a valuable new development.

*Operations and results during fiscal year.*—The work in the last fiscal year was largely directed to maintaining the existing system and the improvement of the more important routes for the use of motor vehicles. New construction was confined to a few major projects upon which work has been in progress for several years.

The work accomplished during the fiscal year may be summarized as follows:

New construction: 52 miles road, 4½ miles sled road, 138 miles trail, 6 airplane landing fields, and 19 shelter cabins.

Improvement: 55½ miles road reconstructed, 86½ miles road surfaced, and numerous small bridges and culverts rebuilt.

Maintenance: 1,387½ miles road, 87 miles tramway, 789½ miles sled road, 4,343½ miles permanent trail, 320 miles temporary flagged trail, 736 miles telephone lines, 30 airplane landing fields, and 47 shelter cabins.

Total for all classes of work: 7,273 miles, consisting of 1,531½ miles of road, 87 miles tramway, 794 miles sled road, 4,431½ miles of permanent trail, and 320 miles temporary flagged trail.

The more important roads upon which new construction was performed were the McCarthy-Nizina, Mount McKinley National Park, Gulkana-Chisana, Long-Poorman, Kasilof, Iliamna, Circle Hot Springs, Nome-Council, and Lucky Shot Mine-St. Peters. The bridge renewal program was continued.

The important Richardson Highway was maintained open during the entire season. Improvement to new standard was continued and except for a few short sections this road is now in excellent condition for auto traffic. During the 1931 season tourist travel began in June.

Surfacing of the Steese Highway was continued. As a result of the improvement traffic over this route continued to increase. During the 1931 season travel began over this route in June.

Construction of the road from Gulkana on the Richardson Highway to Chisana through the mineralized belt north of the Wrangell Mountains was continued. This is now the major new project under construction.

Work was started early in 1930, but an unusual amount of precipitation during the summer greatly retarded the progress of the work.

The cost during the year was \$907,576.62, of which \$343,916.44 was for new work and \$563,660.18 was for maintenance and improvement. Total expenditures during the fiscal year were \$1,288,273.46.

*Condition at end of fiscal year.*—The work of maintenance and improvement during the fiscal year provided additional mileage with a light surface. New mileage opened requires additional improvement and surfacing, and increased traffic in certain sections requires heavier surfacing.

The total cost to the end of the fiscal year is \$16,893,097.78, of which \$8,949,422.76 was for new work and \$7,943,675.02 for maintenance and improvement.

Total expenditures to date are \$17,273,794.62, of which \$15,654,977.23 was from United States funds and \$1,618,817.39 from contributed funds.

*Proposed operations.*—Eight hundred thousand dollars was provided by the act of February 23, 1931. These funds will be expended on maintenance and improvement of the existing system and will provide for some new work. Surfacing will be continued on the Fairbanks-Circle Road and the construction of new mileage will be accomplished on the Gulkana-Chisana, the Fairbanks-Livengood, and the Willow Station-Lucky Shot Mine Roads. Unless much greater annual appropriations are made, little of the much needed new mileage can be constructed and but little can be done to meet the pressing need for extensions and improvements to the system. A reconnaissance will be made to obtain data on the most feasible route for the Alaskan portion of the Pacific Yukon International Highway.

*Amount which can be profitably expended during the fiscal year ending June 30, 1933.*—An appropriation of \$1,241,000 in accordance with the 1929 program, could be profitably expended on the work during the fiscal year 1933. This sum will provide for reasonable maintenance and improvement of the existing system and for construction of much needed mileage on adopted projects and on new projects necessary for the development of the territory.

These funds will be distributed as follows:

District	Maintenance and improvement of existing projects						
	Mileage existing system			(d) Estimated cost	Average per mile		
	Roads	Sled roads	Trails		Roads	Sled roads	Trails
Southeastern	65%		23	\$20,000	\$300		
Bethel		25	985	8,000		\$30	\$15
Endicott	25	177%	338	14,070	300		5
Valdez	105%			57,900	550	20	7
Chitina	28%		307	113,580	500		
Fairbanks	64%	850	1,150	215,540	300	20	5
Southwestern	121%	159	500%	171,770	300	20	5
Kuskokwim	86%	22%		1,147%	300	20	5
Nome	25%	4%		83,050	250	20	5
Total	1,764%	1,403%	8,638	653,000	340	21	6

Does not include Mount McKinley National Park road, 40 1/2 miles, supported by the National Park

District	New construction				Grand total of estimates (a), (b), (c) and (d)
	(b) Approved projects already under way	(c) Approved projects not yet started	(d) New projects likely to develop	Total (b), (c), and (d)	
Southeastern					\$20,000
Bethel					8,000
Endicott					14,070
Valdez					57,900
Chitina	\$200,000			\$200,000	343,500
Fairbanks	50,000		\$250,000	300,000	618,540
Southwestern	85,000			85,000	180,770
Kuskokwim					33,510
Nome					83,050
Total	335,000		250,000	585,000	1,241,000

Total commerce of Alaska for the calendar year 1930:

Commercial statistics

IMPORTS

Merchandise from the United States	\$31,308,291
Merchandise from foreign ports	1,700,636
Silver and gold from foreign ports	52,840
Total imports	33,061,767

EXPORTS

Merchandise to the United States	48,996,962
Merchandise, gold, and silver to foreign ports	347,091
Domestic gold and silver to the United States	7,812,043
Foreign gold and silver to the United States	80,450
Total exports	57,187,146

Grand total, exports and imports 90,232,413

Exports declined \$14,875,527, or 21 per cent, from the corresponding figure for 1929. This decrease is due entirely to decreased exports of canned salmon, copper ore, and raw furs.

Imports decreased \$1,610,456, or 5 per cent, from the corresponding figure for 1929.

The value of Alaska's mineral output in 1930 was \$13,602,000, as compared with \$16,066,000 in 1929.

Minerals were produced in the following order of value: Gold, copper, coal, silver, lead marble, platinum, petroleum, and tin.

Production of gold again exceeded in value that of copper. The production of copper decreased both in quantity and in value. While the decrease in quantity is 14 per cent, the decrease in value is 39 per cent, compared with that for 1929. Gold production exceeded that of the previous year \$633,000, or 8 per cent. This increase was due to increased production by large dredges from interior placer deposits.

There are still large areas in Alaska not adequately prospected, and many promising properties are lying idle because of lack of capital for the necessary equipment. The shortage of enterprising prospectors is a serious drawback that has resulted because wages

for comparable work are actually lower in Alaska than in the States, though expenses are higher. As a consequence Alaska does not attract or hold the class of prospectors it formerly did.

The production of coal showed a slight increase in 1930 compared to that of the preceding year. The output was furnished mainly by the Evans Jones and Alaska-Matanuska mines in the Matanuska region and the Suntrana mine in the Healy River field.

In 1930, as in the past, all the petroleum produced in Alaska was obtained from the Katalla field. The gasoline and distillate produced by the refinery were sold in the local market.

Canned salmon exported in 1930 showed a decrease of over 5 per cent in quantity and a decrease of 22 per cent in value compared to the preceding year.

*Additional duties of the board.*—The president of the board is also district engineer for the Juneau, Alaska, river and harbor district. The other two members of the board are placed under the immediate orders of the district engineer, and the secretary and disbursing officer of the board is disbursing officer for the district.

The president of the board, in addition to his other duties, has under the provisions of acts of Congress approved June 17, 1910, and June 15, 1917, been detailed for consultation or to superintend the construction or repair of any aid to navigation authorized by Congress in the sixteenth (includes Territory of Alaska) lighthouse district.

Since 1921 the board has supervised or directed the construction of various public works for the Territory.

By informal arrangement, effective April 1, 1929, the president of the board has agreed to act for the National Park Service, Department of the Interior, on certain matters relating to the improvement of the Sitka National Monument and the development of Mount McKinley National Park. Expenditures, \$168,488.22.

At the request of the Quartermaster General of the Army, the board has agreed to assume charge of the administration of the Sitka National Cemetery, created by Executive order of June 12, 1924. Expenditures, \$937.47.

By direction of the Secretary of War the board has undertaken the regulation of Lowell Creek, Alaska, for the protection of Government property adjacent thereto, as provided in act of Congress approved March 23, 1928. Expenditures, \$8,265.02.

By authority of the Chief of Engineers the board has undertaken the supervision of the construction work and operations of licensee, including stream gaging, connected with the power development on Klutna River, Alaska.

At the request of the commanding general, Ninth Corps Area, the board has undertaken the supervision of the construction of a water-supply system for Chilkoot Barracks, Alaska.

The president of the board was designated by the President as a special commissioner for the study of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska.

## Financial summary

Amount expended on all projects:		
From Federal funds (includes receipts from sales, etc., to June 30, 1929) to June 30, 1930	\$14,532,308.63	
Net expenditures, 1931	1,122,663.60	\$15,654,972.23
From contributed funds (includes receipts from sales, etc., to June 30, 1929) to June 30, 1930		
	1,453,212.53	
Net expenditures, 1931	163,604.86	1,618,817.39
		17,273,794.62
Cost of new work	8,949,422.76	
Cost of maintenance and improvement	7,943,675.03	
Value plant, materials, etc., on hand	380,696.84	
Total expended		17,273,794.62
Balance unexpended		789,113.08
Grand total to be accounted for		18,062,907.70

Appropriations to June 30, 1931:		
Construction and maintenance of military and post roads, bridges, and trails, Alaska	11,750,000.00	
Wagon roads, bridges, and trails, Alaska fund	3,651,714.30	
Construction of wharf at Juneau	22,500.00	
Flood control of Lowell Creek	100,000.00	
Flood control of Lowell Creek (contributions)	25,000.00	
Increase of compensation, War Department	95,059.50	
National cemeteries	5,638.72	
Roads and trails, national parks	647,876.37	
Contributed funds (by Territory of Alaska and others)	1,600,483.51	
Adjustments to June 30, 1929 (refurbishments, refunds, sales, etc.)	104,037.24	
Total		18,062,907.70

Fiscal year ending June 30	1927	1928	1929	1930	1931
Cost of new work	\$706,762.40	\$430,023.16	\$630,546.95	\$516,003.39	\$343,016.44
Cost of maintenance and improvement	510,374.43	322,745.02	510,610.96	741,256.26	563,660.18
Total expended (net)	1,217,136.83	1,252,768.18	1,447,163.91	1,256,340.65	*1,288,273.46
Appropriated by War Department acts	1,022,366.00	822,000.00	203,000.00	800,000.00	500,000.00
Allocated from Alaska fund	142,905.28	73,638.64	150,432.68	218,757.56	54,843.66
Contributed by Territory of Alaska and others	93,772.30	210,852.74	213,612.77	188,440.87	167,872.69
Flood control of Lowell Creek		100,000.00			
Flood control of Lowell Creek (contributions)		25,000.00			
National cemeteries	800.00	792.83	1,000.00	1,000.00	797.72
Roads and trails, national parks	16,000.00	80,000.00	65,000.00	220,000.00	156,876.37
Total	1,295,977.67	1,295,290.21	1,229,845.55	1,426,853.73	1,180,590.44

\* For 1927 the figures shown include certain improvements classed as "New work" which for subsequent years are included under "Maintenance and improvement."

† Of this amount, \$340,660.84 represents the cost of supplies, materials, and equipment unissued.

July 1, 1930, available balance	\$800,998.10
Amount appropriated by War Department, net approved Feb. 23, 1931	800,000.00
Amount accrued to Alaska fund during fiscal year 1931	54,843.66
Amount contributed by Territory of Alaska and others	167,872.69

National cemeteries, 1931.....	\$800.00
Roads and trails, national parks, 1931-32.....	150,876.37
Total.....	2,077,389.82
Deduct "National cemeteries, 1930," revoked.....	2.28
Total resources.....	2,077,388.54
Net amount expended during fiscal year.....	1,258,273.40
July 1, 1931, balance unexpended.....	789,115.08
July 1, 1931, outstanding liabilities.....	255,819.41
July 1, 1931, balance unobligated.....	533,295.67
Amounts available on June 30, 1931:	
From War Department, act approved Feb. 23, 1931.....	710,036.34
From War Department, act approved Mar. 23, 1928, for flood control, Lowell Creek, Alaska.....	1,118.92
From Alaska fund.....	12,478.03
From funds contributed.....	17,237.55
From national cemeteries.....	6.45
From roads and trails, national parks.....	48,237.79
Amount available for fiscal year ending June 30, 1932.....	789,115.08
Amount (estimated) required to be appropriated for completion of existing projects.....	3,875,000.00
Amount that can be profitably expended in fiscal year ending June 30, 1933:	
New construction.....	585,000.00
Maintenance and improvement.....	638,000.00
Total.....	1,223,000.00

## Appropriations

1. Construction and maintenance of military and post roads, bridges, and trails, Alaska:	
Total amount appropriated to June 30, 1920, (see detailed statement on p. 2105, Annual Report of the Chief of Engineers, 1920).....	\$3,370,000.00
Act of—	
June 30, 1906.....	*35,000.00
June 30, 1921.....	425,000.00
June 30, 1922.....	465,000.00
Mar. 2, 1923.....	*650,000.00
June 7, 1924.....	725,000.00
Dec. 6, 1924.....	*55,000.00
Feb. 12, 1925.....	900,000.00
Apr. 15, 1926.....	900,000.00
Feb. 23, 1927.....	*1,022,500.00
Mar. 23, 1928.....	825,000.00
Mar. 23, 1928, flood control, Lowell Creek.....	100,000.00
Feb. 28, 1929.....	800,000.00
May 25, 1930.....	800,000.00
Feb. 23, 1931.....	800,000.00
Total.....	\$11,873,100.00

\*Exclusive of available funds.

\*For Fairbanks-Council survey.

\*Includes \$300 for survey of Juneau Wharf.

\*Deficiency to cover increase of compensation, 1925.

\*Includes \$22,500 for Juneau Wharf.

2. Construction and maintenance of wagon roads, bridges, and trails, Alaska fund, act of Congress approved Jan. 27, 1905, as amended by an act approved May 14, 1906:	
Total receipts to June 30, 1920 (see detailed statement on p. 2103, Annual Report of the Chief of Engineers, 1920).....	\$2,128,569.89
Fiscal year—	
1920 (supplementary).....	153,805.19
1921.....	98,437.82
1922.....	135,975.05
1923.....	119,227.10
1924.....	115,803.20
1925.....	123,871.33
1926.....	137,421.66
1927.....	142,905.28
1928.....	78,853.64
1929.....	150,432.68
1930.....	216,767.86
1931.....	54,843.66
Total.....	\$3,651,714.86
3. Increase of compensation, War Department:	
Fiscal year—	
1918.....	145.20
1919.....	
1920.....	
1921.....	940.00
1922.....	1,322.00
1923.....	32,846.67
1924.....	56,805.54
Total.....	95,059.50
4. National cemeteries:	
Fiscal year—	
1925.....	302.17
1926.....	300.00
1927.....	300.00
1928.....	792.83
1929.....	1,170.00
1930.....	1,467.72
1931.....	800.00
Total.....	5,038.72
5. Roads and trails, national parks:	
Act of—	
Mar. 3, 1925.....	80,000.00
May 10, 1926.....	50,000.00
Jan. 12, 1927.....	10,000.00
Mar. 4, 1928.....	60,000.00
Mar. 4, 1929.....	65,000.00
May 14, 1930.....	220,000.00
Feb. 14, 1931.....	156,876.37
Total.....	647,876.37
Total Federal appropriations.....	16,273,388.05

## Contributed funds

(Act of Congress approved June 30, 1921, Alaska special fund)

## 1. By the Territory of Alaska:

Fiscal year—		
1920	-----	\$115,517.94
1921	-----	113,746.61
1922	-----	54,737.23
1923	-----	112,012.38
1924	-----	100,325.35
1925	-----	78,978.45
1926	-----	132,499.10
1927	-----	88,015.78
1928	-----	191,363.59
1929	-----	159,932.45
1930	-----	170,480.64
1931	-----	149,108.37
Total	-----	\$1,503,768.42

## 2. By others:

Fiscal year—		
1922	-----	1,633.77
1923	-----	1,379.54
1924	-----	4,540.00
1925	-----	833.12
1926	-----	2,819.01
1927	-----	5,756.63
1928	-----	19,489.15
1929	-----	23,430.32
1930	-----	17,969.23
1931	-----	18,764.32
Total	-----	96,715.09

## 3. Funds contributed for the control of Lowell Creek, Alaska

Total contributed funds	-----	1,625,483.51
Grand total, all funds	-----	17,898,872.43

LYTLE BROWN,  
Major General, Chief of Engineers.

## FINDING LIST

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Buffalo, N. Y.	1639
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San Francisco, Calif	1743
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Seattle, Wash	1916
Juncan, Alaska	1973
Honolulu, Hawaii	1989
San Juan, P. R.	2004
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Mississippi River Commission	2034



ANNUAL REPORT OF THE ALASKA ROAD COMMISSION

FISCAL YEAR 1931

REPORT UPON THE CONSTRUCTION AND  
MAINTENANCE OF MILITARY AND POST  
ROADS, BRIDGES AND TRAILS; AND OF  
OTHER ROADS, TRAMWAYS, FERRIES,  
BRIDGES, TRAILS, AND RELATED WORKS  
IN THE TERRITORY OF ALASKA

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TWENTY-SEVENTH ANNUAL  
REPORT

1931

PART II

OPERATIONS

---

BOARD OF ROAD COMMISSIONERS  
FOR ALASKA

JUNEAU, ALASKA

1931

Alaska Road Commission,  
Juneau, Alaska, October 1, 1931.

The Honorable, The Secretary of War  
(Through The Chief of Engineers, United States Army)  
Washington, D. C.

Sir:

In compliance with the provisions of Sec. 2 of an Act of Congress approved January 27, 1905, as amended by Act approved May 14, 1906, I have the honor to submit the attached report of the operations of the Board of Road Commissioners for Alaska for the fiscal year ending June 30, 1931:

First Lieut. Raymond B. Oxrieder, Corps of Engineers, assumed the duties of secretary and disbursing officer on August 1, 1930, relieving First Lieut. James G. Christiansen, Corps of Engineers, who remained on duty with the Commission to include November 3, 1930. First Lieut. Leland B. Kuhre, Corps of Engineers, succeeded Lieut. Oxrieder as secretary and disbursing officer on February 1, 1931. Lieut. Oxrieder remained on duty with the Commission throughout the remainder of the year. First Lieut. Albert H. Burton, Corps of Engineers, reported for duty July 20, 1930 and First Lieut. Walter W. Hodge, Corps of Engineers, reported for duty November 5, 1930. Both officers remained on duty with the Commission throughout the remainder of the year.

The duties of this Commission, whose members also serve on river and harbor work under the Chief of Engineers, have required close cooperation with Territorial and Federal agencies. This cooperation has been accomplished without friction and has resulted in efficient execution of public works and economical expenditures of Federal and Territorial funds. These desirable results are attributable in part to the authority vested in the Commission by law to handle its business "of its own motion" and make decisions in Alaska.

The accomplishments during the past year are shown in the report.

Respectfully,

MALCOLM ELLIOTT,

Major, Corps of Engineers, U. S. Army,  
President.

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Opening road for spring traffic—Snowalide Gulch—Richardson Highway .....	" "
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Muskeg and niggerheads complicate road location .....	" "
Road across tundra—Spring thaw—Nome District .....	" "
Innumerable glaciers, are sources of flashy silt laden streams which present unusual bridging problems .....	" "
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A shelter cabin serves its purpose .....	" "
Log-ribbed bridge and brush snow fence on Steese Highway between Fairbanks and Circle .....	" "
First stage of road construction over soft ground in Matanuska Valley. Gravel surfacing supported by brush .....	" "

## REPORT UPON THE CONSTRUCTION AND MAINTENANCE OF MILITARY AND POST ROADS, BRIDGES, AND TRAILS, ALASKA; and of other Roads, Tramways, Ferries, Bridges, Trails and Related Works in the Territory of Alaska.

### REPORT OF THE BOARD OF ROAD COMMISSIONERS FOR ALASKA.

Malcolm Elliott.....President.  
 L. R. Atkins.....Engineer Officer.  
 Leland B. Kuhre.....Secretary and Disbursing Officer.

For description of Project Under This Commission see Part I of this Report, contained in Annual Report of the Chief of Engineers, United States Army.

### STATUTORY AUTHORITY.

An Act to provide for the construction and maintenance of roads \* \* \* \* in the District of Alaska, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all monies derived from and collected for liquor licenses, occupation or trade licenses, outside of the incorporated towns in the Territory of Alaska, shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the "Alaska Fund" and to be wholly devoted to the purposes hereinafter stated in the Territory of Alaska \* \* \* \* and all the residue (65% of total fund) of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said Territory \* \* \* \*.

SECTION 2. That there shall be a board of road commissioners in said district, to be composed of an engineer officer of the United States Army to be detailed and appointed by the Secretary of War, and two other officers of that part of the army stationed in said district and to be designated by the Secretary of War. The said engineer officer shall, during the term of his said detail and appointment, abide in said district. The said board shall have the power, and it shall be their duty, upon their own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters of said district to any town, mining or other industrial camp or settlement, or between

any such towns, camps, or settlements therein, if in their judgment such roads or trails are needed and will be of permanent value for the development of the district; but no such road or trail shall be constructed to any town, camp, or settlement which is wholly transitory or of no substantial value or importance for mining, trade, agricultural, or manufacturing purposes. \* \* \* \* \* In case no responsible and reasonable bid can be secured, then the work may be carried on with material and men procured and hired by the board. The engineer officer of the board shall in all cases supervise the work of construction and see that the same is properly performed. \* \* \* \* \* It shall be the duty of said board, as far as practicable, to keep in proper repair all roads and trails constructed under their supervision, and the same rules as to the manner in which the work of repair shall be done, whether by contract or otherwise, shall govern as in the case of the original construction of the road or trail. The cost and expense of laying out, constructing, and repairing such roads and trails shall be paid by the Secretary of the Treasury, through the authorized disbursing officer of the board, designated by the Secretary of War, out of the road and trail portion, of said "Alaska Fund" upon vouchers approved and certified by said board. \* \* \* \* \* (Act of January 27, 1905, as amended by Acts of May 14, 1906 and March 3, 1913.) \* \* \* \* \*

**Provided,** That hereafter, so long as the construction and maintenance of "Military and Post" Roads in Alaska, and of other roads, bridges, and trails in that Territory shall remain under the direction of the Secretary of War, he be authorized to submit such estimates for the consideration of Congress as are in his judgment necessary for a proper prosecution of the work. (Act of July 9, 1918). Hereafter when an appropriation for this purpose for any fiscal year shall not have been made prior to the 1st day of March preceding the beginning of such fiscal year, the Secretary of War may authorize the Board of Road Commissioners to incur obligations for this purpose of not to exceed 75 per centum of the appropriation for this purpose for the fiscal year then current, payment of these obligations to be made from the appropriation for the new fiscal year when it becomes available. (Act of Feb. 12, 1925).

**Provided,** That the Secretary of War is hereby authorized to receive from the Territory of Alaska, or other source, such funds as may be contributed by them to be expended in connection with funds appropriated by the United States for any authorized work of construction, repair, and maintenance of roads, bridges, ferries, trails, and related works in the Territory of Alaska, and to cause such funds to be deposited to the credit of the Treasurer of the United States, and to expend the same in accordance with the purpose for which they were contributed. (Act of June 30, 1921).

### CURRENT APPROPRIATION.

**Construction and Maintenance of Roads, Bridges, and Trails, Alaska:** For the construction, repair, and maintenance of roads, tramways, ferries, bridges, and trails, Territory of Alaska, to be expended under the direction of the Board of Road Commissioners described in Section 2 of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes," approved January 27, 1905, as amended by the Act approved May 14, 1906, and to be expended conformably to the provisions of said Act as amended \$800,000 to be immediately available. (Act of February 23, 1931).

### OPERATIONS DURING THE FISCAL YEAR.

The work during the fiscal year ending June 30, 1931, was executed under appropriations for "Construction and maintenance of roads, bridges and trails, Alaska, 1930-1931" approved May 28, 1930, and "1931-1932," approved February 23, 1931, and from receipts from the "Alaska Fund," Act of Congress approved January 27, 1905, as amended by Act approved May 14, 1906. Work was also done which was covered by funds contributed by the Territory of Alaska, the National Park Service and others, Act of Congress approved June 30, 1921.

The work in the last fiscal year was largely directed to maintaining the existing system and the improvement of the more important routes for the use of motor vehicles. New construction was confined to a few major projects upon which work has been in progress for several years.

The work accomplished during the fiscal year may be summarized as follows:

**New construction:** 52 miles road, 4½ miles sled road, 133 miles trail, 6 airplane landing fields, and 19 shelter cabins.

**Improvement:** 55¼ miles road reconstructed, 86¼ miles road surfaced and numerous small bridges and culverts rebuilt.

**Maintenance:** 1,387½ miles road, 87 miles tramway, 789½ miles sled road, 4,343¼ miles permanent trail, 329 miles temporary flagged trail, 736 miles telephone lines, 30 airplane landing fields and 47 shelter cabins.

**Total for all classes of work:** 7,273 miles consisting of 1,581¼ miles of road, 87 miles tramway, 794 miles sled road, 4,481¼ miles of permanent trail, 329 miles temporary flagged trail.

The more important roads upon which new construction was performed were the McCarthy-Nizina, Mount McKinley National Park,

Gulkana-Chisana, Long-Poorman, Kasikof, Ilamna, Circle Hot Springs, Nome-Council and Lucky Shot Mine-Willow Station. The bridge renewal program was continued.

The important Richardson Highway was maintained open during the entire season. Improvement to new standard was continued and except for a few short sections this road is now in excellent condition for auto traffic. During the 1931 season tourist travel began in June.

Surfacing of the Steese Highway was continued. As a result of the improvement traffic over this route continued to increase. During the 1931 season travel began over this route in June.

Construction of the road from Gulkana on the Richardson Highway to Chisana, through the mineralized belt north of the Wrangell Mountains was continued. This is now the major new project under construction.

Work was started early in 1930 but an unusual amount of precipitation during the summer greatly retarded the progress of the work.

The roads constructed by the Commission, originally intended for wagon traffic, are now generally of higher standard suitable for automobiles and light trucks. The demand for roads of this type is increasing, and effort is made in each case to provide a gravel surface for the road.

### ORGANIZATION.

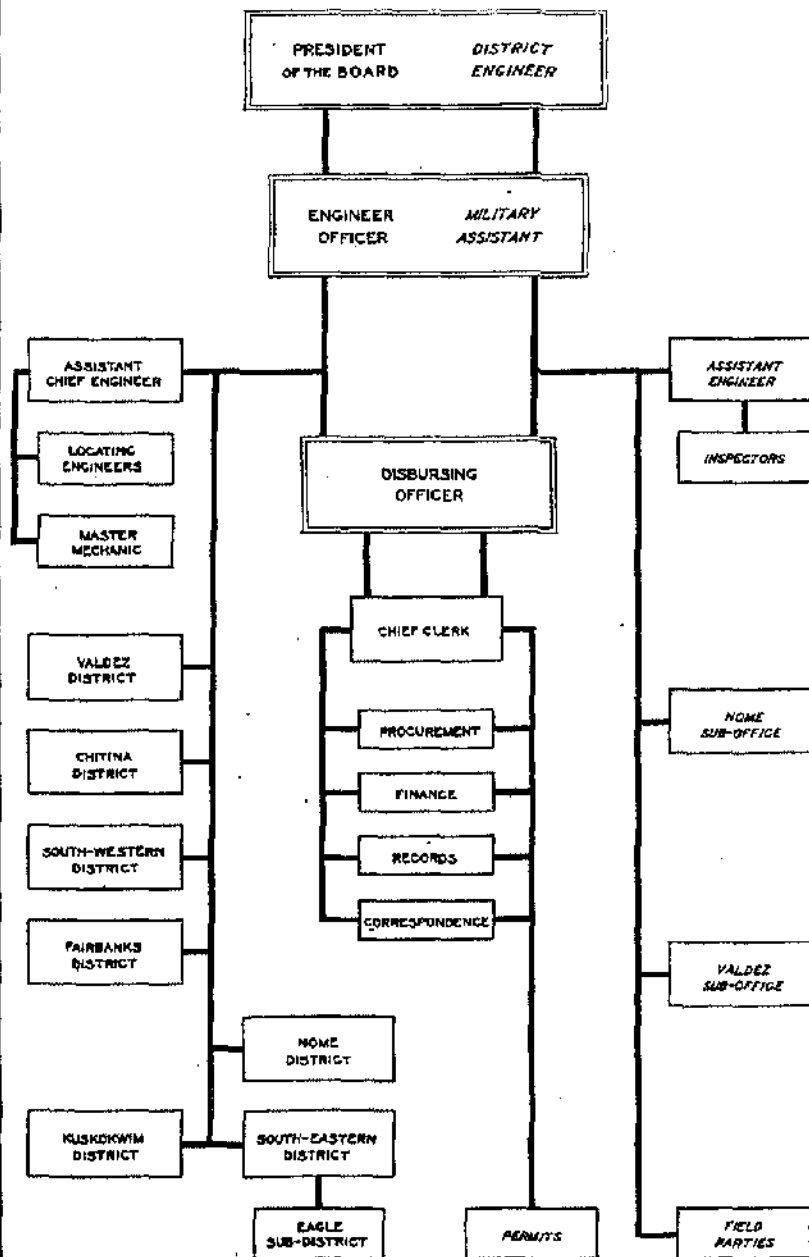
The headquarters of the Commission are located at Juneau; a sub-office is maintained at Washington, D. C., as required. The Territory is divided into seven districts and three sub-districts with boundaries as shown on the maps accompanying the district reports herein.

Each district is in charge of a Superintendent who supervises the work of the local foremen. The members of the organization are experienced men who in nearly all cases have been with the Commission many years.

## DUAL ORGANIZATION CHART

ALASKA ROAD COMMISSION AND JUNEAU ENGINEER DISTRICT

CONSISTING OF—  
A PRESIDENT  
AN ENGINEER OFFICER  
A DISBURSING OFFICER



**MACHINERY AND EQUIPMENT.**

The following additional equipment was purchased during the fiscal year:

- 21 Auto Trucks, Ford, 1-yd., dump.
- 4 Auto Trucks, Ford, 1½-ton, freight.
- 6 Auto Trucks, Ford, light cargo.
- 3 Graders, tractor-drawn.
- 1 Power Grader.
- 1 Plow, reversible backfiller attachment for 30 tractor.
- 1 Plow, reversible backfiller attachment for 60 tractor.
- 3 Scrapers, automatic, Fresno.
- 3 Shovels, gas, 1/3-yd.
- 2 Tractors, Monarch "35."
- 2 Tractor Trailers (Crawler type).

The high cost of labor has made necessary the prosecution of as large a part of the work as possible with mechanical equipment.

The Commission is now well equipped to handle engineering construction anywhere in the Territory. Its major items of equipment include the following:

- 2 Auto Trucks, Dodge.
- 158 Auto Trucks, Ford.
- 40 Auto Trucks, G.M.C.
- 1 Auto Truck, Pierce Arrow.
- 1 Auto Truck, White.
- 9 Boilers, steam.
- 1 Boiler, piledriver.
- 2 Cars, gasoline section.
- 11 Cars, roller bearing push.
- 4 Compressors, air, portable.
- 1 Conveyor, portable.
- 2 Crushers, stone.
- 1 Drum, hoisting.
- 30 Drags, road.
- 1 Drag, planer.
- 2 Ditchers, road.
- 1 Engine, donkey.
- 6 Engines, hoisting.
- 37 Graders, road, tractor drawn.
- 12 Graders, road, horse drawn.
- 9 Graders, power.
- 1 Hoist, Allison.
- 10 Jackhammers.
- 7 Levels, surveying.
- 1 Loader, bucket, power driven.

- 1 Loader, belt conveyor, portable.
- 2 Locomotives, gasoline.
- 3 Machines, mowing, horse drawn.
- 8 Machines, mowing, tractor attachment.
- 12 Maintainers, tractor drawn.
- 5 Piledrivers, complete.
- 56 Plows.
- 2 Plows, reversible backfiller attachment for 30 tractor.
- 1 Plow, reversible backfiller attachment for 60 tractor.
- 1 Plow, snow, lateral rotary type.
- 8 Rollers, road.
- 3 Saws, power driven.
- 1 Sawmill, portable.
- 1 Scarifier.
- 56 Scrapers, slip.
- 5 Scrapers, wheel.
- 1 Scraper, self-loading, tractor drawn.
- 14 Scrapers, Fresno.
- 23 Scrapers, automatic, tractor drawn.
- 1 Shovel, ½-yd., steam.
- 10 Shovels, ½-yd., gasoline.
- 50 Sleds, bob.
- 30 Tractors, Caterpillar "30."
- 4 Tractors, Caterpillar "60."
- 2 Tractors, Monarch "35."
- 4 Tractors, Holt.
- 1 Tractor, Case.
- 7 Tractors, Fordson.
- 30 Trailers, Highway.
- 2 Trailers, crawler type.
- 9 Transits, surveying.
- 72 Wagons.
- 4 Welding Outfits.
- 14 Winches, hand.

### PROGRESS OF THE WORK.

The high scale of wages and supplies in the Territory is a large element in the cost of this work. The rate paid for labor varies from \$3.50 to \$6 per day with board for common labor. The cost of subsistence and forage is also correspondingly high. Besides these high costs, the nature of the work in Alaska adds to the cost in a way to make comparisons with road work in the United States difficult. In the roads built here the cruising, clearing, grubbing and construction of the road includes all work done upon roads in the settled parts of the United States from pioneer days. Even with this the mileage cost of our roads can be looked upon with a great deal of gratification.

In the classification of the Commission, roads are any roads cleared, grubbed, ditched, graded, and drained sufficiently to accommodate wagon traffic. Motor vehicles are now using these roads in increasing numbers. This requires a gravel surface at an increased first cost, but with an eventual saving in annual maintenance charges.

Sled roads are cleared and grubbed like wagon roads, but not graded. They are drained only sufficiently to prevent their destruction by the summer rains. Their wearing surface is of snow. Double bob-sleds, drawn by two, four or more horses haul heavy loads over these roads as well as over the wagon roads in winter time. During the past few seasons, caterpillar tractors have been successfully used during the winter time, and such traffic is expected to increase.

Trails include any construction less than the above, suitable for dog-sleds or single horse-drawn double-ender in winter and pack trains in summer. Except where frozen river surfaces are used some work is always necessary to permit the use of dog teams.

Flagged trails represent cut-offs across frozen lakes, arms of the sea, etc. The marks are necessary to prevent travelers from getting lost in bad weather.

The growth of the road system is shown in the diagram facing page 30 of this report. Only net increases are shown as the short sections abandoned from time to time because of disuse are not included. The following table summarizes the status of the work to date:

STATUS	—MILEAGE—					
	Road	Sled Road	Trail	Total	Flagged	Grand Total
1920 Report	1,031	636	8,223	4,890	712	5,603
ADDITIONS:						
New Mileage	792½*	817½	5,295	6,905½	.....	6,905½
Reclassified	179	253½	80	512½	.....	512½
GRAND TOTAL	2,002½	1,707½	8,598	12,307½	712	13,019½
DEDUCTIONS:						
Transferred to other bureaus	121¼	9	45½	175¾	.....	175¾
Reclassified	39½	173½	308½	512¾	.....	512¾
Abandoned or dropped account duplication of routes	99	125½	918	1,142¾	.....	1,142¾
NET TOTAL	1,751¾*	1,399½	7,326	10,477	712	11,189
*—Includes 87 miles tramroad.						
No work 1931	83½	605½	2,844½	3,533	383	3,916
Work 1931	1,668½	794	4,481½	6,944	329	7,273

From the above table it will be noted that the present system aggregates 11,189 miles, consisting of 1,664½ miles of road, 87 miles of tramroad, 1,399½ miles of sled road, 7,326 miles of trail and 712 miles of temporary flagged trail. The net gain in mileage for the

eleven year period has been 5,687 miles, including 633 1/2 miles of road, 87 miles of tramroad, 753 1/2 miles of sled road and 4,103 miles of trail.

During the past fiscal year the expenditures were distributed over the following mileage:

DISTRICT	Road	Sled Road	Trail	Flagged Trail	Total
Southeastern Alaska	64%	---	23	---	87%
Eagle	21	86	119	---	226
Valdez	105	---	---	---	105
Chitina	272	---	228	---	500
Fairbanks	627 1/2	529 1/2	731	---	1,888
Southwestern Alaska	248 1/2	84 1/2	236 1/2	---	569
Kuskokwim	78 1/2	77 1/2	1,178 1/2	---	1,334 1/2
Nome	251 1/2	16 1/2	1,986	329	2,563
<b>Totals</b>	<b>1,668 1/2</b>	<b>794</b>	<b>4,481 1/2</b>	<b>329</b>	<b>7,273</b>

**SUMMARY OF ALL EXPENDITURES TO JUNE 30, 1931.**

The Commission has expended the following funds since the beginning of road and trail development in the Territory:

F. Y.	W. D. Acts	Alaska Fund	Other Funds*	Total
1906	\$ ---	\$ 28,000.00	\$ ---	\$ 28,000.00(a)
1906	118,172.09	57,420.77	---	175,592.86(a)
1907	197,930.31	148,814.79	---	346,745.70(b)
1908	244,857.18	180,773.72	---	365,629.90(b)
1909	236,674.37	146,971.82	---	383,646.89(b)
1910	237,498.50	102,838.29	---	340,336.79(b)
1911	100,000.00	156,777.95	---	256,777.95
1912	150,103.58	167,302.49	---	317,406.07
1912	---	17,052.23(c)	---	17,052.23
1913	125,010.91	228,117.56	---	353,128.47
1914	153,174.43	170,688.37	---	323,862.80
1915	126,852.28	157,915.34	---	284,768.12
1916	165,011.73	135,798.89	---	300,720.62
1917	500,031.75	76,716.15	---	576,747.90
1918	325,000.00	272,020.18	145.20	597,165.38
1919	346,651.95	52,372.21	---	399,024.26
1920	132,426.73	124,992.96	101,184.56	358,604.25
1921	350,000.00	218,247.21	98,551.98	666,799.19
1922	426,807.34	173,029.19	83,411.15	683,247.68
1923	556,813.67	34,398.23	150,970.59	742,182.49
1924	730,423.17	87,623.87	138,000.81	956,047.85
1925	775,665.02	168,518.01	194,164.61	1,138,347.64
1926	1,018,577.53	115,935.11	182,705.05	1,317,217.69
1927	889,444.65	207,909.20	119,814.04	1,217,168.89
1928	860,192.96	134,593.13	258,882.17	1,253,668.13
1929	997,297.64	134,371.66	315,494.61	1,447,163.91
1930	775,408.36	188,542.03	342,401.26	1,256,349.65
1931	751,366.08	202,547.78	334,359.60	1,288,273.46
<b>TOTALS</b>	<b>\$11,185,190.37**</b>	<b>\$3,769,418.62***</b>	<b>\$2,310,185.63</b>	<b>\$17,273,794.62</b>

- (a)—To October 31st.
- (b)—To September 30th.
- (c)—U. S. Treasury Adjustment.
- \*—Other Funds—Includes the following expenditures from other appropriations:

F. Y.	Increase of Compensation	Quartermaster General	Funds Contributed	National Park Service
1918	\$ 145.20	---	---	---
1920	---	---	101,184.56	---
1921	940.00	---	97,611.98	---
1922	1,322.09	---	79,089.06	---
1923	28,867.72	---	121,212.87	---
1924	45,675.36	---	92,325.45	---

1925	15,186.08	300.00	98,708.53	80,020.00
1926	---	230.17	132,414.88	50,000.00
1927	---	812.60	163,001.10	16,000.94
1928	---	792.83	198,089.34	60,000.00
1929	---	1,000.00	249,494.61	65,000.00
1930	---	1,498.80	180,680.15	150,821.31
1931	---	937.47	155,604.36	167,817.27

**TOTALS** .....\$95,076.45(a) \$5,632.27 \$1,618,817.39(b) \$599,669.52(c)

- (a)—Includes refunds of \$16.95.
- (b)—Includes refunds of \$10,571.43.
- (c)—Includes refunds of \$20.94.

\*\*Total War Department appropriations .....\$11,873,100.00  
Balance unexpended July 1, 1931 ..... 711,156.26

Amount expended .....\$11,161,944.74  
Add Navy Department reimbursement ..... 3,976.19  
Add repayments and voucher corrections 1929 ..... 420.82  
Add repayments and voucher corrections 1921-1929 ..... 18,843.02

Total expenditures .....\$11,185,190.37  
\*\*\*Total Alaska Fund .....\$ 3,651,714.36  
Balance unexpended July 1, 1931 ..... 12,478.08

Amount expended .....\$ 3,639,230.33  
Add Receipts from Sales, 1905-20 .....\$ 49,443.09  
Add Voucher Corrections, 1905-20 ..... 1,462.68  
Add Sales, Refunds, etc., 1921-1929 ..... 79,271.53

Total expenditures .....\$ 3,769,418.62

These expenditures are summarized as follows:

**FEDERAL APPROPRIATIONS:**

Alaska Fund, 1905-1920	\$ 2,157,491.19
War Dept. Acta, 1905-1920	3,059,397.01
Increase of Compensation, 1918-1920	145.20
U. S. Treasury Adjustment, 1912	17,052.23
Alaska Fund, 1921-1931	1,594,875.20
War Dept. Acta, 1921-1931	8,026,912.28
Increase of Compensation, 1921-1925	94,931.25
Quartermaster General, 1925-1931	5,623.27
National Park Service, 1925--1931	639,659.52
Lowell Creek	98,881.08
<b>Total</b>	<b>\$15,654,977.23</b>

**CONTRIBUTED FUNDS:**

Territory of Alaska, 1920	\$ 101,184.56
Territory of Alaska, 1921-1931	1,409,178.29
Miscellaneous, 1922-1931	108,459.64
<b>Total</b>	<b>\$ 1,618,817.39</b>
<b>Grand Total</b>	<b>\$17,273,794.62</b>

In addition to the above funds, disbursed through the U. S. Treasury, the Commission has supervised the expenditure of the following funds disbursed by other agencies for road and trail development:

Road tax, labor, and miscellaneous contributions, 1905-1920	\$ 200,000.00
Department of Agriculture, 1920	202,702.87
Quartermaster General, 1901-1902	100,000.00*
Chief of Engineers, 1904-1905	34,521.78*
Territorial Funds and Forest Revenues Prior to 1921	684,239.64**
Territorial Divisional Commissioners, 1921-1929	194,339.60
Territorial Divisional Commissioners, 1930	1,000.00
Seward Peninsula Tramway, 1923	24,014.00
Tolovana Tramway, 1924	6,425.00



Katag Portage Survey, 1925 .....	312.72
Miscellaneous, 1926-1930 .....	22,349.59
Total .....	\$1,470,614.91

\*Expended prior to organization of the Alaska Road Commission.  
 \*\*Expended prior to supervision by the Alaska Road Commission.

### COST OF MAINTENANCE.

The annual cost of maintenance of routes in Alaska varies considerably with the locality, the range of climate being greater than that of the United States, and the cost of labor varying greatly. The experience of this Commission indicates that for all Alaska proper, average maintenance costs, including a fair allowance for floods, etc., are about as indicated in table following:

Classification	Mileage	Annual Maintenance per mile	Total
Wagon Roads .....	1,751.34	\$306	\$525,525
Sled Roads .....	1,339.14	25	34,951
Trails .....	7,328	10	73,280
Flagged Trails .....	71.2	3	2,136
Totals .....	11,189	\$ 56.83	\$635,902

The above does not provide for any improvements or extensions. The intermediate, or interior, sections of many of the through routes need improvement to the same standard as the rest so that the entire route may be used throughout by the same traffic without the necessity of breaking loads. A certain amount of new work on extensions must be provided for each year to keep pace with developments. This has only been possible up to the present time at the expense of needed maintenance work.

### INSPECTION.

The magnitude of the task and extent of territory covered by the wide-flung activities of this Commission may be realized from the fact that it would take two years of continuous traveling on the ground with the best facilities available for a single individual to make a complete inspection of the entire mileage for which the Commission is responsible. In view of the growing use of airplanes in Alaska more comprehensive and frequent inspections can now be made by the members of the Commission than was formerly the case. The President or Engineer Officer spends the greater part of each working season inspecting the field work and ascertaining the needs of all sections for transportation routes.

### FEDERAL AID.

The provisions of the Federal Aid Road Acts do not apply to the Territory of Alaska. The original Federal Aid Road Act was approved July 11, 1916, and was amended by the Act approved February 28, 1919.

The Federal Highway Act of November 9, 1921, as supplemented and amended, is now the basic law governing Federal Aid road work.

The extension of the Federal Aid Road Acts to Alaska has been proposed. In view of the fact that nearly 12 years before the Federal aid idea was adopted, the Alaska Road Commission had been created by Congress in 1905 to meet the special conditions in Alaska, had the work well in hand; and in view of the further fact that the theory, specifications, methods, etc., of the Federal Aid do not meet the conditions in the Territory, Congress has instead increased the powers and appropriations of the Alaska Road Commission.

### DEPARTMENT OF AGRICULTURE.

The National Forests, administered by the U. S. Forest Service, are provided with a road system, the work on which is done by the U. S. Bureau of Public Roads. The territory served by this organization, comprising about 5% of the area of the Territory, lies mostly in Southeastern Alaska and could not be tied in with the rest of the Territory by a road system. The work of the two road building agencies is thus entirely distinct and no overlapping of work or effort exists or is possible.

### TERRITORIAL ROAD LEGISLATION.

The present road law in the Territory, known as the Cooperative Road Act, was passed on April 21, 1919 (Chapt. 11, Session Laws 1919). It was made necessary by the Federal appropriation for the National Forests, which could be expended only provided cooperative funds were appropriated by the Territory, the Department of Agriculture funds becoming available in the ratio of about three dollars of Federal funds to one dollar of Territorial funds. Under this law and subsequent amendments the Territorial Board of Road Commissioners, consisting of the Governor, the Territorial Highway Engineer and the Treasurer of the Territory, are authorized to enter into cooperative agreements with the Department of Agriculture, the Alaska Road Commission, or other Federal bureaus, and to turn over to the disbursing officers of such bureaus Territorial funds to be expended by them upon the cooperative projects.

The following Territorial funds have been appropriated and expended to March 31, 1931:

#### APPROPRIATIONS:

Forest Revenues to June 30, 1930 .....	\$ 320,136.41
April 30, 1927, Shelter Cabins .....	20,000.00
May 3, 1917, Roads, Bridges, Trails and Ferries .....	400,000.00
May 3, 1917, Nizina Bridge .....	25,000.00
May 1, 1919, Shelter Cabins .....	5,000.00
May 1, 1919, Roads, etc. ....	375,000.00
May 6, 1921, Nizina River Bridge .....	25,000.00

May 5, 1921, Seward Peninsula Railway .....	24,014.00
May 7, 1921, Shelter Cabins .....	10,000.00
May 7, 1921, Roads, etc. ....	240,000.00
May 8, 1923, Tolovana Tram .....	6,425.00
May 4, 1923, Roads, etc. ....	240,000.00
May 4, 1923, Shelter Cabins .....	15,000.00
May 6, 1923, Kaltag Portage Survey .....	312.72
April 30, 1925, Roads, etc. ....	269,000.00
April 30, 1925, Shelter Cabins .....	20,000.00
April 30, 1925, Telephone Lines, Seward Peninsula .....	3,990.20
April 30, 1925, Pioneer Cem. Road .....	3,341.02
May 2, 1927, Telephone Lines, Seward Peninsula .....	4,000.00
May 6, 1927, Roads, etc. ....	460,000.00
May 5, 1927, Shelter Cabins .....	32,266.63
April 27, 1929, Telephone Lines, Seward Peninsula .....	5,000.00
May 1, 1929, Telephone Lines .....	74.69
May 2, 1929, Yukon-Kuskokwim Portage .....	7,500.00
May 2, 1929, Roads, etc. ....	320,000.00
May 2, 1929, Shelter Cabins .....	18,628.99
April 16, 1929, Flood Protection, Hyder .....	7,499.51
Deposits from sales and refunds .....	428.75
Total appropriated to March 31, 1931 .....	\$2,848,626.23

## EXPENDITURES:

Expended by Territory prior to April 1, 1921 .....	\$ 684,239.64
Expended by Territory, April 1, 1921 to March 31, 1931 .....	32,639.13
Supervised by A. R. C. 1921-1931 .....	236,691.32
Cooperative with A. R. C. 1920-1931 .....	1,500,201.42
Cooperative with Forest Service 1920-1931 .....	332,199.50
Total expended to March 31, 1931 .....	\$2,827,031.01
Balance, April 1, 1931, Forest Reserve fund .....	7,513.22
On deposit with A. R. C. for authorized work:	
Second Division: Aviation Fields .....	2,000.00
Sunset Creek Road .....	10,000.00
Fourth Division: Aviation Fields .....	1,482.00
Taktotna Aviation Field Road .....	500.00
	\$2,848,626.23

## TERRITORIAL BOARD.

The Territorial Board of Road Commissioners, as now constituted, is composed of the following:

Geo. A. Parks, Governor of the Territory .....	Chairman.
Walstein G. Smith, Territorial Treasurer .....	Member.
Wm. A. Hesse, Territorial Highway Engineer and Secretary .....	

## LOCAL COOPERATION.

Under the authority of the Territorial Cooperative Road Act, approved April 21, 1919, and the Act of Congress approved June 30, 1921, the Commission made additional cooperative agreements for the prosecution of work supported in part by Federal funds and in part by funds appropriated by the Territorial Legislature.

The President of the Commission continued to supervise certain public works for the Territory supported by appropriations of the Territorial Legislature. No Territorial road building organization has been maintained since March 1, 1921.

The following general road funds were expended on Territorial projects during the fiscal year:

## ANNUAL REPORT ALASKA ROAD COMMISSION.

## COOPERATIVE ROAD PROJECTS:

Alaska Road Commission Funds .....	\$103,329.77
Territorial Funds .....	55,097.71
Miscellaneous Contributions .....	18,166.35
Total .....	\$176,593.83

## TERRITORIAL ROAD PROJECTS:

Territorial Funds .....	\$ 40,660.70
Miscellaneous Contributions .....	150.00
Total .....	\$ 40,810.70

## SPECIAL PROJECTS:

Shelter Cabins, Territory, 2nd Division .....	\$ 5,746.48
3rd Division .....	1,897.42
4th Division .....	2,778.25
Aviation Fields, Territory, 1st Division .....	3,185.52
2nd Division .....	7,113.03
3rd Division .....	9,108.93
4th Division .....	5,811.96
Aviation Fields, Miscellaneous Contributions .....	1,981.97
Telephone Lines, Territory .....	5,452.64
Nome Harbor, Territory .....	2,590.00
Valdez Dyke, Territory .....	7,733.88
Gastineau Bur, Territory .....	220.00
Yukon-Kuskokwim Portage, Territory .....	600.00
Yukon-Kuskokwim Portage, A. R. C. Funds .....	3,999.50
Seward Peninsula Tramway, A. R. C. Funds .....	11,671.40
Tolovana Tramroad, A. R. C. Funds .....	6,029.01
Nizina Bridge, A. R. C. Funds .....	8,285.44
Total .....	\$ 84,015.45
Grand Total .....	\$301,419.98

The last biennial Legislature appropriated the following funds for public works in the Territory for the coming biennium, working seasons 1931 and 1932:

Roads, Bridges, Ferries and Trails .....	\$300,000.00
Seward Peninsula, Telephone Lines .....	5,000.00
Pacific-Yukon Highway .....	1,000.00
Iditarod River Improvement .....	7,000.00
Valdez Dyke, reconstruction .....	10,000.00
Improvement Iditarod River .....	5,000.00
Total .....	\$328,000.00

From the first item for "Roads, etc." the following special projects are authorized:

Maintenance Nome Harbor .....	\$ 5,000.00
Cordova Hydroplane Port .....	3,000.00
Eklutna Road .....	25,000.00
Iditarod River Improvement .....	5,000.00
Road Survey, Prince of Wales Island .....	1,500.00
Radio Telephones, 2nd Division .....	5,000.00
Rampart-Eureka Telephone Line .....	600.00
Seldovia Bridge .....	12,500.00
Seward-Spruce Point Road .....	15,000.00
Tanana-Unalakleet Telephone Lines .....	7,000.00
Valdez Dyke, Repair .....	10,000.00
Total .....	\$ 89,600.00

Also it is provided that 30% of the total funds available for "Roads, etc." in the Second and Fourth Divisions, and 50% in the First and Third Divisions may be expended for airplane landing fields and hydroplane moorings.

For the working season of 1931 (fiscal year 1932) the Territorial Board has allotted to the Department of Agriculture \$10,000 and to the Alaska Road Commission the following amounts:

Cooperative Road Projects .....	\$ 77,350
Territorial Road Projects .....	19,360
Shelter Cabins .....	3,850
Aviation Fields .....	12,450
Telephone Lines .....	3,100
Nome Harbor .....	2,500
Valdez Dyke .....	15,000
Iditarod River .....	5,000
Total .....	\$137,550

These amounts are held subject to the call of the Commission.

In addition to the above amounts \$3,482.00 for aviation fields and \$10,500.00 for roads have been deposited. The existing balance of \$17,237.55 in contributed funds includes \$755.53 contributed by the Fairbanks Commercial Club for improvement of the Fairbanks airport, and \$2,500.00 contributed by Willow Creek Mines for road construction.

The cooperative Road Act has worked satisfactorily under the conditions imposed. Certainly, the amount of road work accomplished for the money expended has been far in excess of what would have been possible under separate organizations. Had the Territory attempted to expend its funds under an independent organization, nearly one-fourth of the available funds would have gone into overhead, salary and expenses of a divisional chairman and clerk, rent, light, etc. All of this service was furnished free by the Alaska Road Commission and at no additional cost to itself. In addition, the extensive plant and mechanical equipment of the Alaska Road Commission, representing a capital investment of over \$500,000, were furnished where available in the Territorial work without charge except for fuel and ordinary running expenses. Due to the extensive organization of the Alaska Road Commission, it has also been possible to apply Territorial money to outlying projects where the maintenance of an independent organization would have been impossible or prohibitive in cost. Finally, all available money is lumped together and expended upon a comprehensive system with a continuity in plans and a consistency in operations over an extended period of years.

The Alaska Road Commission, also, is a gainer, under the Cooperative Road Act. By having greater funds available, it is able to consolidate purchases and supplies and thus to secure better prices. Conflicts in plans and complications in operation are avoided. By having funds becoming available all the year round, the difficulties resulting from fiscal year appropriations beginning or terminating about the middle of the open working season are minimized, and the entire organization and conduct of operations, are rendered more flexible.

### AVIATION FIELDS.

Aviation has had a very rapid development in recent years due to the large area of Alaska and scarcity of other means of transportation. While in the United States the use of airplanes may save hours or days, in Alaska, weeks may be saved on a single trip.

To keep pace with the development of aviation the Territorial Legislature has authorized since 1925, the expenditure of a part of Territorial road funds for the construction of aviation fields. The work is performed by the Commission under the existing cooperative arrangement. To date 69 fields have been constructed, 1 is now under construction, and there are 5 natural sites used at times for landing planes, on which no work has been done. (See map in back). Total costs to date including supervised funds are \$158,813.74.

During the past year six commercial companies and one individual operating in Alaska handled the following business:

Planes in service .....	26
Plane miles .....	381,234
Passengers carried .....	7,947
Passenger miles .....	947,695
Mail and express carried .....	161,713

### CONSOLIDATION OF WORK UNDER THE COMMISSION.

The following additional duties have been imposed upon the members of the Commission by appropriate authority:

- (a) Effective April 1st, 1921, the Juneau, Alaska engineer district was created by G. O. No. 1, War Department, Office of the Chief of Engineers, Washington, February 21, 1921. The President of the Commission, in addition to his other duties, was appointed District Engineer; the other two members of the Commission were placed under the immediate orders of the District Engineer and the Secretary and Disbursing Officer of the Commission, was, in addition, designated as Disbursing Officer for the district. The Alaska district is a part of the North Pacific Division. Detailed report of the operations of the Alaska district will be found in the Annual Report, C. of E.
- (b) By par. 3, S. O. No. 50-0, War Department, Washington, D. C., March 9, 1921, and under the provisions of Acts of Congress approved June 17, 1910, and June 15, 1917, the District Engineer who is also President of the Commission, in addition to his other duties, has been detailed for consultation or to superintend the construction or repair of any aid to navigation authorized by Congress in the Sixteenth Lighthouse District (includes the Territory of Alaska).

- (c) At the request of the Territorial government the President of the Commission supervises various Territorial public works such as roads, aviation fields, shelter cabins, telephone lines, flood protection, terminal construction, etc.
- (d) By informal arrangement, effective April 1, 1922, the President of the Commission agreed to act for the National Park Service, Department of the Interior, on certain matters relating to the improvement of the Sitka National Monument and the development of Mount McKinley National Park.
- (e) At the request of the Secretary of the Interior, the Commission made a survey and submitted a special report upon the control of Lowell Creek, Seward, Alaska, to protect government property in the vicinity from damage due to floods. By the act approved February 9, 1927, this flood control work was assigned to the Secretary of War, who designated the Alaska Road Commission as the agency to carry out the work. The War Department appropriation act of March 23, 1928, included funds for the work, which has been completed.
- (f) At the request of the Quartermaster General of the Army, the Commission disburses funds and generally supervises the administration of the Sitka National Cemetery created by Executive Order of June 12, 1924.
- (g) At the request of the Commanding General, Ninth Corps Area, the Alaska Road Commission has undertaken construction of a water supply system for Chilkoot Barracks, the only Army post in Alaska.
- (h) Supervision and inspection on behalf of the Federal Power Commission of hydro-electric developments.
- (i) Under Special Orders No. 161, dated July 12, 1929, the President of the Commission was assigned to duty as instructor for reserve officers in the Territory of Alaska.
- (j) Pursuant to Act of Congress approved May 15, 1930, the President of the Commission was appointed a member of the commission for a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory and Alaska.

#### CONSOLIDATED ENGINEERING ORGANIZATION.

The practical result of the foregoing orders has been the development, without legislation, but through executive order or interdepartmental or inter-bureau agreement, of a practical working arrangement through which the facilities of all the services involved are used inter-

changeably, but a careful account is kept so that each appropriation is eventually expended for the purpose intended by Congress and no appropriation is either increased or diminished by such interchange of working funds or facilities. Separate accounts and reports are rendered to the departments under the direction of which the work is performed. As a result of this coordination numerous public works have been conducted in an economical manner and without the large overhead that would have been necessary if they had been performed by several different bureaus.

The following are the current activities under consolidated engineering direction:

The construction, repair, and maintenance of federal roads, tramways, ferries, bridges, trails, and related works, now aggregating over 11,000 miles, and extending from open-all-the-year-round south coast ports to all inhabited parts of the Territory; Territorial roads, bridges, ferries, aviation fields, telephone lines and trails throughout the Territory, covered by cooperative agreements; shelter cabins; Nome-Shelton Tramway (74 miles operated by cars drawn by motors or by dogs); Tolovana Tramway; Valdez Dyke; Yukon-Kuskokwim Portage; Government float at Juneau.

Improvements of Nome Harbor, Wrangell Narrows, Tolovana River, Ketchikan Harbor, Port Alexander, and Harbor of Refuge, Seward; preliminary examination or survey of Sitka Harbor, Dry Pass, Nome Harbor, Egegik River, Kake Harbor, Stikine River, Petersburg Harbor, Keku Straits, Kodiak Harbor, Tanana River, Wrangell Harbor, Craig Harbor and Isthmus, Nagai Island; flood control Salmon River; the investigation of port facilities; the issuance of permits for fish traps and other structures in the navigable waters along the Territory's 28,000-mile coast line; miscellaneous inspections, public hearings and contingencies of Rivers and Harbors; improvement of Sitka National Monument; development of Mt. McKinley National Park; improvement Chilkoot Barracks Water Supply; administration of Sitka National Cemetery; control of Lowell Creek; maintenance of aids to navigation in Nome Harbor, Safety Harbor and Gastineau Channel Bar; and the inspection of power plant construction at Eklutna.

#### PACIFIC-YUKON HIGHWAY.

The Pacific-Yukon Highway is the name given to a road project which when completed will connect the northwestern part of the United States with British Columbia, Yukon Territory and Alaska. The general route of this highway will probably be as shown on the map accompanying this report. The proponents of the Pacific-Yukon Highway project desire a serviceable automobile road throughout western Canadian Provinces to Alaska which can now be reached only by

ship or by airplane. The northern terminal of this road would probably be Fairbanks.

It is urged in behalf of the project that it would open up vast areas in British Columbia, Yukon Territory and Alaska which are now so inaccessible that development is impracticable.

The total distance from Seattle to Fairbanks over the general route of this highway is about 2,220 miles of which there are now sections of usable road aggregating about 1,250 miles leaving about 970 miles of new road to be built for the completion of the project. This new mileage is distributed about as follows:

British Columbia .....	450 miles
Yukon Territory .....	290 miles
Alaska .....	230 miles
Total .....	970 miles

The country through which this proposed road would run is generally suitable for road building operations and from the information at hand it is not believed that any insuperable obstacles will be found.

In 1929 the Alaska Legislature adopted a memorial to the United States Congress indorsing the project and petitioning that steps be taken toward arranging for conferences on the subject between representatives of the United States and Canada. The same body also passed acts in 1929 and 1931 providing for the advertisement of the advantages of the project and appropriating funds to be used for that purpose.

May 15, 1930, the President of the United States approved the following act:

“(Public—No. 228—71st Congress)  
(H. R. 8368)

“An Act Providing for a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska in cooperation with the Dominion of Canada.

“Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President of the United States is hereby authorized to designate three special commissioners to cooperate with representatives of the Dominion of Canada in a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska, with a view to ascertaining whether such a highway is feasible and economically practicable. Upon completion of such study the results shall be reported to Congress.

“Sec. 2. The sum of \$10,000 is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the purposes of carrying out the provisions of this Act.

“Approved, May 15, 1930.”

Pursuant to the foregoing Act, the President of the United States appointed as commissioners:

Mr. Herbert H. Rice, Assistant to the President, General Motors, Corp., Chairman.

Mr. Ernest Walker Sawyer, Assistant to the Secretary of the Interior.

Major Malcolm Elliott, Corps of Engineers, U. S. Army, President Alaska Road Commission.

## ALASKA TRANSPORTATION PROBLEMS.

The road building policies and methods of work in Alaska are influenced by the very large area to be served and the climatic, physical, and economic conditions prevailing in the Territory.

Alaska's area is about 590,000 square miles, roughly one-fifth that of the United States. It consists of a main central portion with two extensions or panhandles, one extending southeasterly along the western border of Canada and the other southwesterly toward Asia. Along this entire line the Coast Range, rugged and heavily timbered, rises abruptly from the sea forming a barrier which is pierced at only a few places by the rivers which break through to discharge into the Pacific Ocean. These valleys form the avenues of approach to the large interior area of the Territory.

North of these valleys the Alaska Range, composed of lofty ice-covered peaks, extends roughly east and west and divides the southern part of the territory from the wide Kuskokwim and Yukon Valleys whose rivers flow westerly to Bering Sea. The northern boundary of the Yukon Valley is formed by the Brooks Range, another east and west chain of mountains, which separates the Yukon Valley from the northern margin of the Territory drained by a number of short rivers discharging into the Arctic Ocean.

Along the southern coast the winter climate is tempered by the Japan current. The precipitation is quite heavy consisting of rain in summer and either rain or snow in winter.

North of the Coast Range the precipitation diminishes rapidly and the winter climate becomes more severe. Freezing occurs in the fall and the temperatures generally remain below freezing until spring.

Winter temperatures from zero to 30° below zero are normal with occasional periods of 60° to 70° below zero. Snowfall is quite heavy in the mountains but not excessively so in the valleys. The summer climate in the interior valleys is quite agreeable with prevailing temperatures around 65° and occasional periods as warm as 90°. The rainfall is about normal in frequency and intensity.

The southern coast is very mountainous and heavily timbered. The many islands and indentations along the coast form protected waterways and good harbors for facilitating general and local commerce. The various ports along the coast are connected with their adjacent areas by short road systems but a general road system connecting the ports with each other is unnecessary at this time and would be very costly because of the rugged character of the country.

The valleys north of the Coast Range are either flat or rolling and not so heavily timbered as along the coast. At from 2500 to 3000 feet above sea level the tree growth disappears. In the hills and valleys there are vast areas of tundra—black, mucky soil, with permanently frozen subsoil—supporting dense growths of grass, moss, lichens and dwarf shrubs. There are also large areas of gravel and sand, of either glacial or alluvial origin, covered by similar growths. The frozen condition of the subsoil prevents the drainage of the surface by seepage while the accumulated moss and dead vegetation greatly retard surface drainage. The result is that in proceeding across country in Alaska in its normal condition in summer one wades through a peat-like muck, water-soaked and ankle to knee deep. The going is made rough by the profusion of bunches of grass root growth known locally as "niggerheads."

The chief products of Alaska are fish, minerals, timber, furs and farm products. Fish production does not depend on land transportation routes but the production of minerals, timber and farm crops is largely dependent on either railroads or highways. The parts of Alaska that have been most accessible to the main transportation arteries—coast, rivers, railroads and highways—have produced over a billion dollars worth of commodities but no significant development has occurred in the areas at a distance from these arteries despite the fact that it is known that there are many resources worthy of such development. Additional roads are needed to bring under development these now inaccessible sections of the Territory. Much of the high grade mineral land has been exploited by crude hand methods but the low grade deposits can not be worked profitably except by machinery. The delivery of this machinery and the supplies for its operation are dependent on economical transportation usually demanding the use of autotrucks from the railhead or head of navigation.

The population of Alaska was greatly increased by the gold rushes which occurred during the latter part of the nineteenth and

early years of the present century. These people were drawn by the discoveries of gold in large quantities and rich concentrations easily worked by crude methods. Upon the exhaustion of these bonanzas and especially during the World War there was an abrupt decline in Alaska's white population. The bonanza period has been followed by a more systematic and intensive development during which transportation routes were improved and the mining concerns operated with more capital and better equipment. The larger companies are now on a production basis and their operations have brought a slow but consistent growth in population. The increase in the Territory's population in the decade 1920-30 was about 7%. A greater increase depends only on further extension of the road system so that additional mineral resources can be brought under development.

The construction of roads in a new and underdeveloped country such as Alaska involves a number of conditions and problems which do not apply, or apply only in a limited way, to ordinary road construction.

These special conditions are as follows:

The population is small and unable to finance a road system that will provide for all of its needs. Assistance from the Federal government is essential in order to stimulate growth and development so as to bring the Territory to a self supporting basis.

Communities are generally separated from their bases of supply and from each other by long distances, and their development is retarded by the consequent high cost of importing supplies. New roads are needed to relieve this situation.

Railroads reach only a small proportion of the area of the country. Hence, greater reliance must be placed on roads for long-distance transportation than is the case in settled countries.

Traffic to be immediately expected over the roads is much smaller than in settled countries. Less durable types of construction are therefore permissible than in regions where a large traffic must be provided for immediately.

The demands for roads are very large in proportion to the amount of funds available. Hence, if the entire country is to be benefited, the adoption of high standards of construction throughout is impracticable.

It is desirable that construction and improvement of any project shall be programmed so that the entire route will benefit by each year's expenditures instead of bringing the road up to final standard section by section. For example, it is often better to improve a pack trail to wagon or low-standard automobile construction and then improve the road to final standard as the next step, rather than improve each section in turn to final standard.

Traffic over roads during construction must generally be provided for because there are not sufficient side roads to serve as detours. The assistance of road-building crews and their equipment is often needed in order to keep traffic moving over rough or soft places.

Particular attention must be given in Alaska to coordination of the road system with other means of transportation. While in well-developed countries practically all railroads and waterways may be paralleled by automobile roads, in Alaska first attention must be given to localities not served by railroads or waterways.

Roads connect outlying areas with the railroads and waterways, and thus act as feeders. Duplication of facilities by connecting two or more places already on the main axis of transportation is deferred until the less-favored localities have been served.

### CONSTRUCTION METHODS.

Although standard construction and maintenance methods are employed in Alaska so far as practicable, it is necessary to vary therefrom in some instances because of special physical and climatic conditions.

The frozen condition of the subsoil and the constant thawing during summer require special precautions for drainage. Intercepting ditches on the up-hill side of the road are frequently necessary and after the vegetation has been stripped from the roadway the ground must be allowed to thaw, settle and consolidate for several months before completing the grading and applying the surfacing. Frequently one or more seasons are required for such drainage and consolidation and in order to maintain traffic during this period corduroy must be used. Sloughing banks due to thawing of the subsurface ice frequently cause slides which cover and block the roads.

Special methods of revetment and stream control must be used to withstand the destructive effects of sudden and frequent freshets and washouts that result from heavy rains in the mountains or the release of impounded waters by breaks in glaciers. The most suitable type of revetment for this purpose is built of brush weighted down with stone in bundles wrapped in wire mesh to prevent its washing away.

Gravel for road surfacing is generally available within reasonable hauling distance. Graveling is necessary for practically all roads which are used by automobiles. Concrete or other forms of hard surfaced roads are nowhere warranted in the present stage of development of the Territory.

Bridges are built of native or imported timber or steel, depending on their importance. Fir has been found to be the most suitable ma-

terial for timber bridges but improvements in methods of local timber production now in progress will, if successful, make possible some use of Alaska hemlock for structural purposes. Metal culverts are being introduced to replace the culverts of native timber heretofore used.

Modern road building machinery is used. The Commission is well equipped with graders, maintainers, power shovels, tractors, etc.

### TRAFFIC STATISTICS.

A traffic census was begun by the Commission in 1911. Comparing the expenditures for freight on each route at the present rate with the cost of transporting the same amount of freight at the rates prevailing before the road was constructed, a figure is obtained which represents the economic saving to the community served by the construction of the particular route in point.

The data thus collected indicates a considerable annual saving in cost of transportation of freight due to the construction of roads by the Commission. It is doubtful, however, if a large portion of the freight would have been transported without the roads and trails and the indirect loss that would have been occasioned by the restriction on output and development if the roads did not exist cannot be estimated.

In the interior, the great cost of moving freight by teaming or packing together with the difficulty and uncertainty of moving it at all, constitutes the main obstacle to the growth and development of the district.

The cost of transportation by the usual modes of transport in Alaska is shown by the following table:

Winter:	Per Ton-Mile
Bob-sled (sled road).....	\$ 0.90
Double-ender (trail).....	1.30
Dog-team (trail).....	6.30
Summer:	
Truck (wagon road).....	.60
Wagon (wagon road).....	1.50
Pack train (trail).....	4.80
Man (no trail).....	26.67*

(\*)—Average from very widely varying figures. At Lisianski Inlet, in Southeastern Alaska, lumber, pipe, tar paper, groceries, etc., carried on the backs of Indians from the beach up a slippery mountain trail about 7,500 feet long to a new gold strike in a little basin at about 800 feet elevation cost 4 cents per pound or \$80.00 per ton—over 1 cent per ton-foot.

The table shows the actual cost at the rates for teams, labor, food, forage, etc., prevailing in the great interior regions of Alaska. They are based also on the costs of hauling large quantities. On the

South coast the comparative values are the same, but the actual values are about one-third less because of lower costs of above controlling elements.

The available records of traffic show a few decreases for the calendar year 1930 as compared with 1929. Travel on the Alaska Railroad and the steamship lines also decreased, due, it is believed, to general stagnant business conditions. The comparison between 1929 and 1930 shown in the table below, is necessarily limited to passenger and freight traffic over automobile roads.

Comparative Statement of Traffic Over Typical Routes

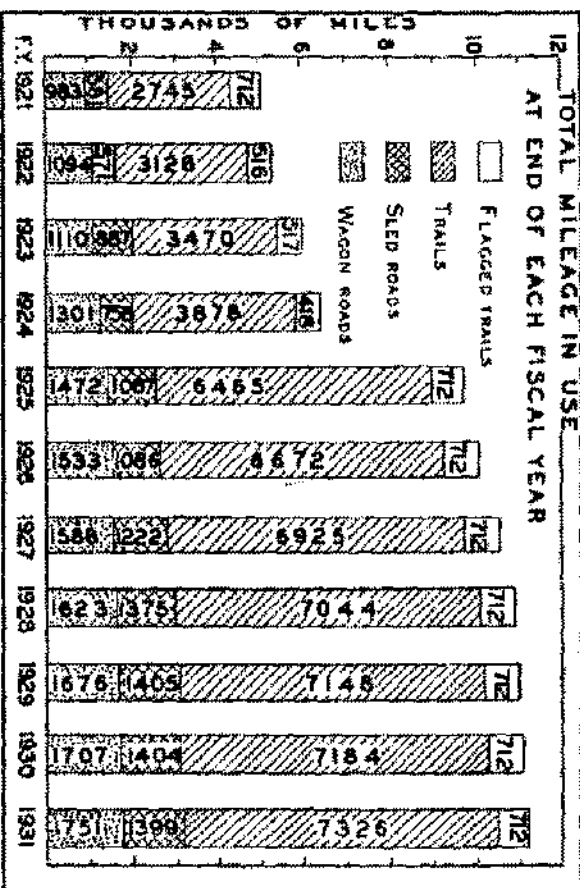
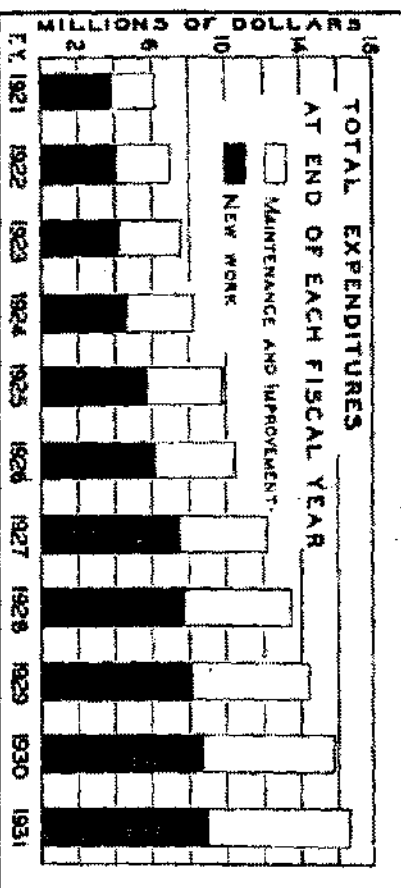
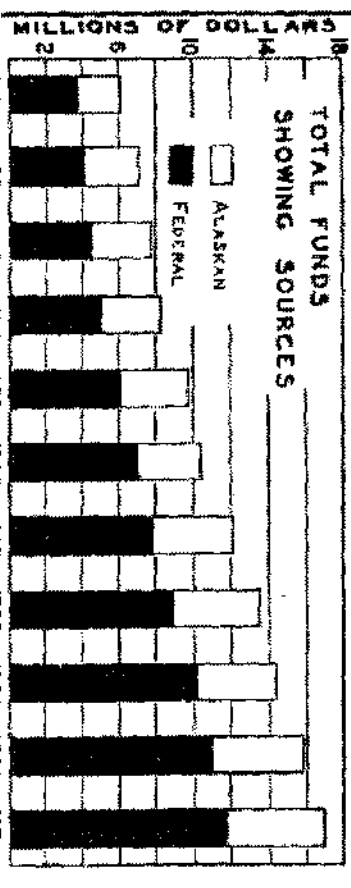
Route	Persons	Motor Vehicles	Tonnage
Haines-Pleasant Camp	1929 6,881	1929 7,933	1929 2,257
Valdez	1929 18,856	1929 13,938	1929 7,844
Grundler	1929 4,251	1929 2,966	1929 1,288
Dry Creek	1929 3,086	1929 1,818	1929 1,442
Seese Highway	1929 4,005	1929 2,802	1929 1,052
Anchorage Loop	1929 40,682	1929 47,802	1929 13,584
Wasilla-Fishhook	1929 3,383	1929 2,802	1929 1,719
Wasilla-Krsk	1929 4,005	1929 2,802	1929 1,052
Wasilla-Hatamna	1929 8,114	1929 5,624	1929 1,581
McKinley Park Road	1929 6,800	1929 7,059	1929 2,270
Nome-Council	1929 517	1929 3,930	1929 3,954
Nome-Bessie	1929 28,288	1929 518	1929 44
Total	133,248	133,248	48,856

1930 TRAFFIC CENSUS

District	No. Route	Station	Period	No. of Persons	Motor Vehicles	Wagons	Stds	Pack Horses	Tonnage
<b>SOUTHEASTERN</b>									
Haines-Pleasant Camp	3A&B	Wells	Jan.-Dec.	7,938	2,649	51	273		253
<b>VALDEZ</b>									
Valdez-Chitina-Fairbanks	4BA	Valdez	May-Oct.	13,938	4,446				805
Valdez-Chitina-Fairbanks	4BA	Canyon	May-Oct.	8,854	2,828				751
Valdez-Chitina-Fairbanks	4BB	Tiekerl	June-Sept.	1,892	948				620
<b>CHITINA</b>									
Chitina-Valdez-Fairbanks	6E	Chitina	Jan.-Dec.	6,322	2,276	4	120		581
Chitina-Valdez-Fairbanks	4D	Dry Creek	Jan.-Dec.	5,256	3,187	4	75		364
Gulkana-Chitochina	55A	Gakona	Jan.-Dec.	450	265	4	70		214
Chitochina-Slate Creek	55B	Chitochina	Jan.-Dec.	40	2	5	16		41
McCarthy-Dan Creek	57	McCarthy	Jan.-Dec.	2,260	900	10	80		300
<b>FAIRBANKS</b>									
Fairbanks-Chitina-Valdez		Grundler	May-Oct.	2,668	1,653			8	211
Fairbanks-Circle	7G	Fox	Jan.-Dec.	53,482	30,347				18,807
Fairbanks-Circle	56	Miller House	June-Nov.	1,814	692	42			376
Ruby-Poorman	38A&E	Long	Jan.-Dec.	1,602	160	152	610		429
Ferry-Riva Creek	88	Ferry	Jan.-Dec.	698	78	26	86		70
<b>SOUTHWESTERN</b>									
Nancy-Susitna	36H	Nancy	Jan.-Dec.	159			35		5
Archangel Extension	35A	Fishhook	Jan.-Dec.	855	298	110	25		408
Willow Creek Extension	35D	Lucky Shot	Jan.-Dec.	656	325	60			495
Gold Chord Branch	35DA	Fishhook	Jan.-Dec.	813	300	283	80		385
Lucky Shot-Willow Station	35DB	Lucky Shot	July-Dec.	140	30	55	10		146
Wasilla-Fishhook	35E	Wasilla	Jan.-Dec.	3,302	2,010	4	43		1,187
Wasilla-Krsk	35F	Wasilla	Jan.-Dec.	3,308	1,581	58	47		287
Wasilla-Fairmer-Matasuska	35G&H	Wasilla	Jan.-Dec.	5,554	2,030	234	266		480
Houston-Willow Creek	35N	Houston	Jan.-Dec.	184			120		140
Fishhook-Goldmist	35O	Fishhook	May-Oct.	713	180	130	50		255
Bogard Road	35R	Wasilla	Jan.-Dec.	875	246	96	58		177
McKinley Park Road	35D	Park Headquarters	Jan.-Dec.	7,069	3,684	3	322		824
Hatamna-Hatamna Bay	35	Hatamna	Jan.-Dec.	300		60	22		52
Talkeetna-Cache Creek	35I	Talkeetna	Jan.-Dec.	655		23	285		350
Anchorage Loop	78	Anchorage	Apr.-Dec.	47,802	17,105	100	150		498
Anchorage-Lake Spenard	75A	Anchorage	Jan.-Dec.	37,115	17,730	19	1,610		467
Gantwell-Valdez Creek	78	Gantwell	Jan.-Dec.	270				180	30



District	No. Route	Station	Period	No. of Persons	Motor Vehicles	Wagons	Sleds	Pack Horses	Tonnage
Abbott Highway	34	Kodiak	Jan.-Dec.	2,109	620	480	...	48	100
Homer Spit Road	38	Homer	Jan.-Dec.	8,370	810	270	330	...	308
<b>NOME</b>									
Nome-Council	3	Safety	June-Oct.	618	168	20	...	48	33
Nome-Bessie	13A	Nome	May-Nov.	33,100	14,600	...	...	...	3,335
Bessie-Snake River	13B	Bessie	May-Nov.	2,850	1,500	...	...	...	250
Candle-Candle Creek	28	Candle	May-Oct.	8,000	1,000	300	...	...	585
Seward Peninsula Railroad	39A	Nome	Jan.-Oct.	416	280	...	...	...	177
<b>KUSKOKWIM</b>									
Ophir-Dishkakel	20DB	Ophir	Jan.-Dec.	72	...	...	43	...	4
Takotna-Flat	32A	Takotna	June-Oct.	64	...	...	...	...	...
Iditarod-Flat	32B	Flat	Jan.-Dec.	922	346	46	275	...	760
Iditarod-Ophir	32C	Ophir	Jan.-Dec.	107	...	...	98	...	7
Flat-Crooked Creek	32D	Flat	Jan.-Dec.	178	...	...	126	...	18
Flat Head-Flat Creek	33C	Flat	Jan.-Dec.	746	163	43	14	...	120
Head Flat Creek-Willow Creek	33D	Flat	Jan.-Dec.	398	103	86	18	...	32
Flat-Otter Discovery	33E	Flat	Jan.-Dec.	326	85	184	46	...	180
Flat-Holy Cross-Anvik	34A	Flat	Jan.-Dec.	310	...	...	206	...	12
Iditarod-Anvik	34B	Iditarod	Jan.-Dec.	156	...	...	98	...	6
Cripple-Poorman	38B	Cripple	Jan.-Dec.	152	...	...	132	...	18
Ophir-Cripple	38C	Ophir	Jan.-Dec.	176	...	...	32	...	21
Ophir-Takotna	38D	Takotna	Jan.-Dec.	1,298	273	46	808	...	246
Little Creek Road	38DA	Little Creek	June-Oct.	146	124	5	...	...	24
Poorman-Ophir	38F	Ophir	May-Oct.	83	...	...	...	...	...
Canes Creek Road	38H	Takotna	May-Oct.	148	85	38	...	...	85
Cripple-Crippia Mt.	41A	Cripple	Jan.-Dec.	161	...	...	84	23	20
McGrath-Takotna	50A	Takotna	Jan.-Dec.	821	...	...	491	...	46
McGrath-Telda	50B	McGrath	Jan.-Dec.	468	...	...	375	...	46
McGrath-Candle Creek	50C	McGrath	Jan.-Dec.	86	...	...	64	...	7
Medfra-Nixon Mine	50F	Medfra	Jan.-Dec.	388	...	18	49	...	32
Bethel-Quinhagak	92A	Bethel	Jan.-Dec.	216	...	...	136	...	3
Tuluksak-Bethel	92B	Bethel	Jan.-Dec.	1,346	...	...	1,386	...	18
Quinhagak-Goodnews Bay	92F	Quinhagak	Jan.-Dec.	118	...	...	94	...	14
Goodnews Bay-Tortak	93C	Togiak	Jan.-Dec.	12	...	...	9	...	...
Togiak-Nushagak	93H	Nushagak	Jan.-Dec.	212	...	...	178	...	18
Lewis Point-Naknek	92I	Naknek	Jan.-Dec.	394	...	...	314	...	21
Naknek-Egegik	92J	Egegik	Jan.-Dec.	237	...	...	172	...	7
Crooked Creek-Aniak	92L	Aniak	Jan.-Dec.	474	...	...	268	...	24
Aniak-Tuluksak	92M	Aniak	Jan.-Dec.	316	...	...	256	...	14
Tuluksak-Foothills	92O	Tuluksak	Jan.-Dec.	18	...	...	14	...	...
Holy Cross-Kaltanek	92P	Holy Cross	Jan.-Dec.	348	...	...	244	...	14



**ROAD CONSTRUCTION AND EXPENDITURES**

**ALASKA ROAD COMMISSION 1905 - 1931**

### TWENTY-SEVEN YEARS' SERVICE.

With the period covered by this report the Alaska Road Commission concludes its twenty-seventh year of service. The work accomplished consists of the construction and maintenance of 1,751 $\frac{1}{2}$  miles of wagon and tram road, most of which is suitable for automobiles, 1,399 $\frac{1}{2}$  miles of winter sled road, 7,326 miles of trail and 712 miles of flagged trail. The total costs to the end of the fiscal year are \$16,893,097.78 of which \$8,949,423.76 was for new work and \$7,943,675.02 was for maintenance and improvement. The total expenditures to date are \$17,273,794.62 of which \$11,885,553.61 were derived from Federal appropriation acts. The balance, \$5,388,236.01, or over 31 per cent of the total expenditures, was obtained from Alaskan sources. The work accomplished, the funds expended for new work and maintenance and the amounts derived from Federal and Alaskan sources are shown on the diagram opposite. The work accomplished by the Commission naturally divides itself into three periods or phases.

The first was that covered by the period of time during which General Wilds P. Richardson, U. S. Army, Retired, was President of the Commission and extended from 1905 to 1917. This was essentially a period of pioneering. While this period covered nearly all the stampedes into the Territory, settlements and traffic lines of communication were very unsettled. With small but increasing appropriations, the pioneer development of the Territory was followed with great intelligence through this period. By 1913 a comprehensive program of operations was drawn up calling for the expenditure of \$7,500,000 during the succeeding ten years. During the last two years of General Richardson's direction, Congress appropriated \$500,000 each year for the work.

The largest project of the Commission, the Richardson Highway from Valdez to Chitina to Fairbanks, was located and improved over the major portion of the distance so as to provide for wagon traffic. By 1907 it was passable throughout for dog-teams; by 1910 for a light horse-drawn wagon; and in 1913 the first light automobile made the through trip from the interior to the coast. This period laid the foundation for all future work and terminated with the opening of the so-called War Period, 1917-20.

During this second period the work of the Road Commission along with many other Federal works both in Alaska and the U. S., suffered from lack of support because of the precedence given to war activities. Appropriations during the last two years of the period were reduced to \$100,000 per year, prices were high and labor scarce. Under such disadvantages the gain in mileage was slight and maintenance funds were available only for the most urgent requirements. However, such roads as were needed for the commerce of the Territory

were kept open. Major Wm. H. Waugh, Engineers, U. S. Army, was President of the Commission during this period.

The third period, 1920 to the close of the fiscal year, 1931, has been characterized by increased appropriations, broader legislation, procurement of mechanical equipment, reopening of old trails and roads, heavier construction to withstand motor traffic, and adjustment of lines of communication to the vast change brought about in Alaska by the completion of The Alaska Railroad from Seward which reached Fairbanks in 1923. Federal appropriations increased and other resources were secured so that funds available for the current season's work aggregate \$1,000,000. General James G. Steese was President of the Commission from 1920 to 1927, inclusive.

The pioneer period of the Alaska Road Commission is largely over. All existing mileage has been opened and improved, so far as funds have permitted. The present system of roads serves as the basis for future development of overland routes throughout the territory. This development calls only for additional funds for construction.

### EXISTING PROJECT.

The Commission prepared a ten-year program in 1920, calling for an expenditure of \$10,000,000 during the succeeding ten years. Appropriations, exclusive of the Alaska Fund and Territorial contributions, for the first five years aggregated \$3,220,000. The program as then revised, in order to speed up the completion of the work, called for the expenditure of \$9,000,000 during the second five years of the ten-year period. Appropriations for the second five-year period aggregated 4,325,000. Progress has been accordingly somewhat curtailed.

A new program prepared in 1929 covering the fiscal years 1932 to 1941 inclusive has been submitted to the Secretary of War and transmitted by him to Congress for consideration. This program calls for total Federal appropriations in addition to contributed and tax funds, of \$14,247,000. Amounts required each year in accordance with the above program are shown in the following table.

Fiscal Year	Working Year	For Maintenance and Improvement*	For New Construction	Total	Amount Appropriated
1932	1931	\$ 656,000	\$ 400,000	\$ 1,056,000	\$800,000
1933	1932	641,000	600,000	1,241,000	.....
1934	1933	636,000	900,000	1,536,000	.....
1935	1934	626,000	900,000	1,526,000	.....
1936	1935	611,000	900,000	1,511,000	.....
1937	1936	652,000	1,000,000	1,652,000	.....
1938	1937	638,000	900,000	1,538,000	.....
1939	1938	724,000	900,000	1,624,000	.....
1940	1939	748,000	600,000	1,348,000	.....
1941	1940	765,000	400,000	1,165,000	.....
Totals		\$6,747,000	\$7,500,000	\$14,247,000	\$ .....

\*Exclusive of \$230,000 estimated to be derived annually from Alaska fund and Territorial contributions to be applied to "Maintenance and Improvement."

### PROPOSED OPERATIONS.

This report covers operations up to June 30, 1931, or practically the working season of 1930. Current operations (working season of 1931) will be covered in the annual report for 1932. About \$1,000,000 is available from all sources for the year. These funds will be expended on the rehabilitation and maintenance of the existing road and trail system, for the construction and maintenance of aviation fields, and for other special work performed with Territorial funds. Little can be done to meet the pressing need for improvements and extensions of the system, without much greater annual appropriations than have been made up to the present. In addition to contributed and tax funds, an estimate of \$800,000 has been submitted for the fiscal year ending June 30, 1933, and has been approved by the Department. This sum if made available will permit a continuation of the improvement of the Richardson and Steese Highways, ordinary maintenance and some improvement of the shorter systems and a continuation of construction work on the important Gulkana-Chisana route, and on a few smaller projects.

### JUNEAU HEADQUARTERS.

The general office of the Commission is located at Juneau, the capital of the Territory. This is the headquarters for all activities of the members of the Commission.

The field activities of the Commission extend to all inhabited parts of the Territory, but the largest projects and the bulk of its expenditures are located in the central part of the Territory tributary to the Richardson Highway and The Alaska Railroad. Close liaison is maintained with all other Federal or Territorial bureaus or officials.

The President of the Commission has general charge of the operations of the Commission, conducts hearings, investigates new projects, allots available funds, and approves and certifies, on behalf of the Commission, all vouchers and expenditures. He spends a majority of his time in the field keeping in close touch with the progress of the work and of conditions generally in the Territory.

The Engineer Officer supervises the work of construction in the field, prepares estimates, requisitions, etc., and oversees the design of major structures. He spends most of his time in the field and undertakes a great deal of pioneer reconnaissance work. The President and the Engineer Officer interchange functions in different parts of the Territory, thus expediting the handling of emergencies.

The Secretary and Disbursing Officer is in general charge of the office, handles purchases and supply, and disburses the funds of the Commission. A bonded disbursing clerk is stationed in each district for local disbursements.

By means of the cable, telegraph, and radio, the general office is in constant touch with each district office.

### WASHINGTON, D. C., SUB-OFFICE.

A sub-office is usually maintained by a representative of the Commission in the office of the Chief of Engineers, U. S. Army, Munitions Building, Washington, D. C., during the winter months. At other times no member of the Commission remains at Washington but administrative affairs concerning the Commission are carried on through the office of the Chief of Engineers.

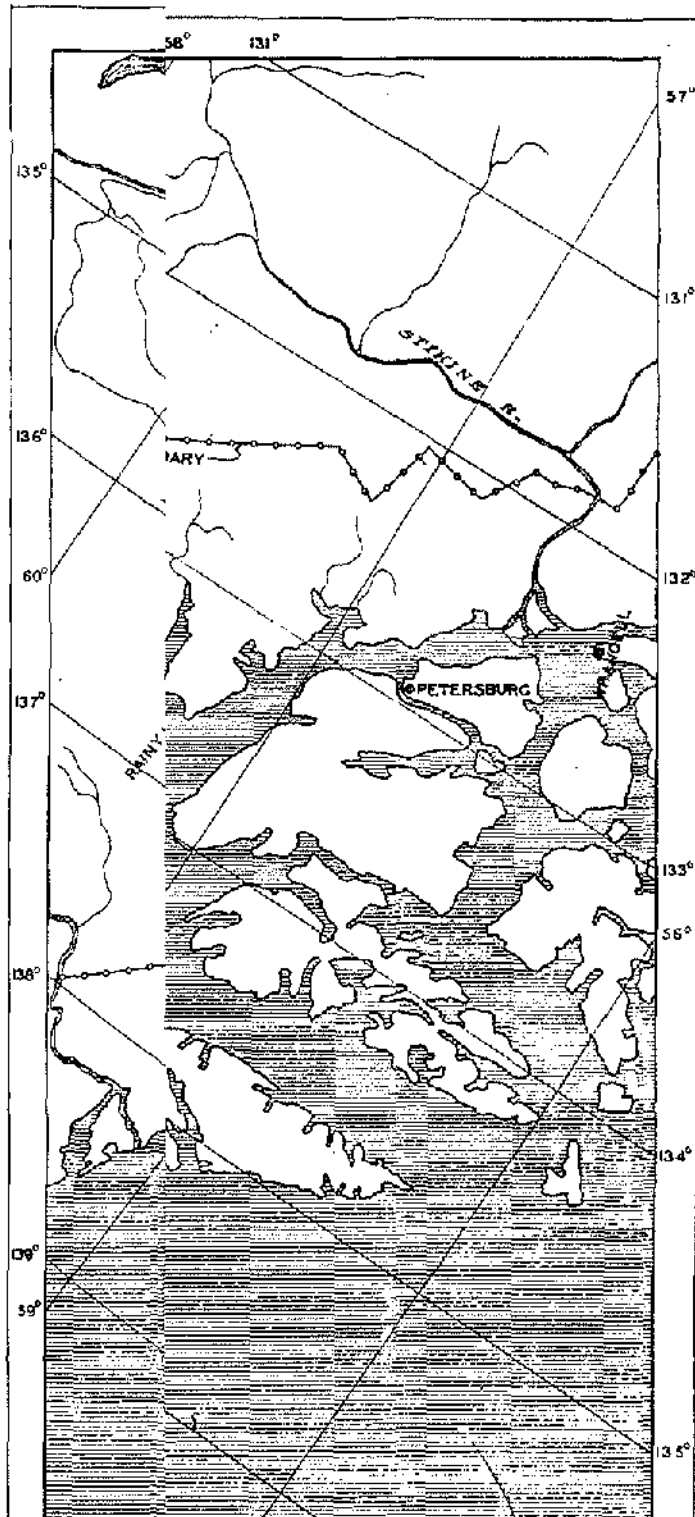
### SEATTLE, WASH., ENGINEER OFFICE.

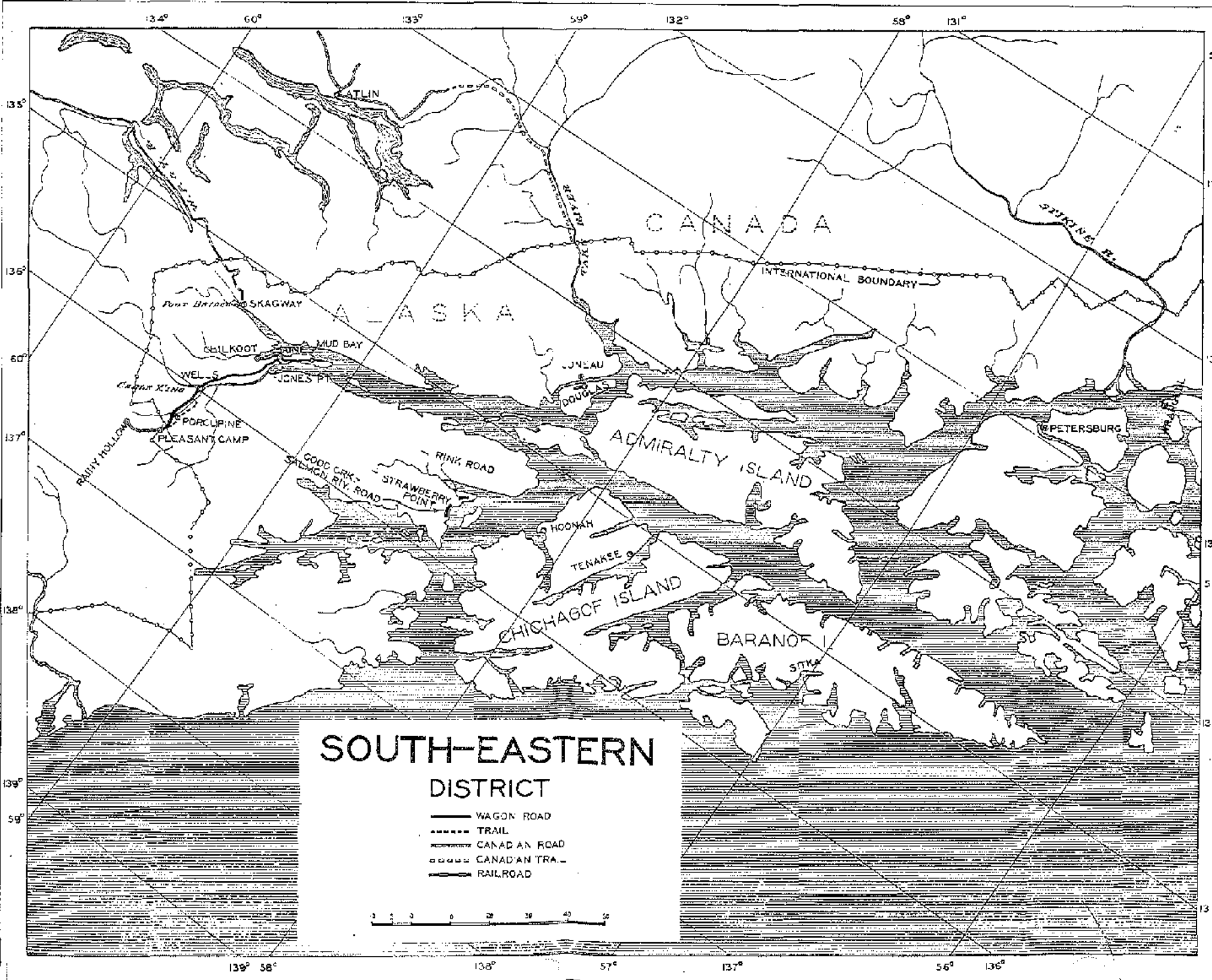
By informal arrangement, the District Engineer, U. S. Engineer Department, Seattle, Wash., acts as a purchasing agent of the Commission. Upon request he advertises and canvasses bids, inspects and ships supplies, answers inquiries, secures information, and, in general represents the Commission in Seattle. For this service he charges the Commission only for the actual time of such of his subordinates as may be actually engaged in this work. This accommodation results in a considerable saving to the United States, as otherwise the Commission would be compelled, during the busy season, to maintain a qualified representative in Seattle and to provide for office space, fuel and light, clerical help, etc.

The services rendered to this Commission through such purchases and shipments are invaluable. The low prices obtained and the prompt shipments made have been an important factor in extending its work.

The supplies purchased include practically everything from bridge iron, metal culverts, forage, subsistence and heavy road machinery, to small tools, office equipment, and stationery. Cost of supplies purchased and the cost for the entire transaction including advertising, acceptance, inspection and shipment, and all expenses incidental thereto, were as indicated in the following table:

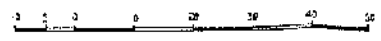
Fiscal Year	Cost of Supplies Purchased	Seattle Office Charge	Per Cent
1924	\$ 182,247.50	\$ 3,048.17	1.67
1925	192,082.70	3,933.91	2.05
1926	249,945.06	3,647.97	1.46
1927	154,840.85	3,343.28	2.16
1928	165,192.35	3,390.34	2.05
1929	188,231.31	3,546.26	1.88
1930	213,123.37	3,413.10	1.60
1931	190,532.98	3,527.29	1.85
Totals	\$1,537,202.12	\$ 27,850.32	1.81





# SOUTH-EASTERN DISTRICT

- WAGON ROAD
- - - TRAIL
- CANADIAN ROAD
- o o o o CANADIAN TRAIL
- RAILROAD



## SOUTHEASTERN DISTRICT.

Supervised from Juneau Office.

Lt. J. G. Christiansen, July 1 to July 31, 1930.

Lt. R. E. Oxrieder, Aug. 1, 1930, to Jan. 31, 1931.

Lt. L. B. Kuhre, Feb. 1 to June 30, 1931.

R. D. Walkley, General Foreman, Haines.

Peter Trierschild, General Foreman, Sitka.

This district embraces all the territory east of the 141st meridian, the so-called Panhandle.

Due to the rugged topography and the excellent system of sheltered waterways through transportation will always be by water, short road systems serving areas developed along the coast.

All road expenditures in this district were upon co-operative projects supported by the Territory and the Alaska Road Commission, with the exception of the Haines-Chilkoot, Gastineau Bar and Sitka-Pioneer Cemetery Road, which are exclusively Territorial projects. The Sitka National Monument is a co-operative project with the National Park Service and the Sitka National Cemetery is largely supported by funds from the Quartermaster General.

## SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road	Trail	Total Miles
2E**	Gastineau Channel Bar	....	....	....
2H	Juneau Wharf	....	....	....
2J	Juneau Float	....	....	....
3A*	Haines-Wells	24½	....	24½
3B*	Pleasant Camp Extension	17½	....	17½
3C*	Porcupine Extension	6	15	20
3D*	Haines-Mud Bay	10	....	10
3E**	Haines-Chilkoot	3	....	3
3F*	Haines-Jones Point	1½	....	1½
14*	Sitka-Indian River	¾	....	¾
14A	Sitka National Monument	....	2	2
14B	Sitka National Cemetery	....	....	....
14C**	Sitka Pioneer Cemetery Road	½	....	½
14D*	National Cemetery Road	½	....	½
14A*	Skagway Trails	....	6	6
44E**	Skagway Aviation Field	....	....	....
31*	Good Creek-Salmon River	1½	....	1½
31A*	Rink River	¾	....	¾
Totals		65½	23	88½

(\* Cooperative with Territory of Alaska.  
 (\*\*) Entirely supported by Territorial Funds.

## DESCRIPTION.

For detailed description see Part II Annual Report for 1929. The following changes and additions should be noted:

2J—This project includes a landing float for use by government boats, with an approach road located along the north side of the rock

dump in Gastineau Channel. The road is 500 feet in length and the float 156 feet in length.

3E—This road was relocated. The route now follows the shore line, well above high tide, around the peninsula north of Haines. It is suitable for light motor traffic.

40—This road was included in the Forest Road system on Feb. 7, 1930 and has accordingly been dropped from the summary of sub-projects.

44B—This aviation field is located in the north end of the Skagway townsite. It is 310 ft. by 1960 ft.

**OPERATIONS DURING THE YEAR.**

Important operations other than routine maintenance are summarized by subprojects as follows:

2J—500 lin. feet of road were graded along the side of the rock dump. A float 156 feet long and 12 feet wide was constructed, connected by a 50 foot gang plank to a landing dock 12 feet by 20 feet. Creosoted fir piles were used in the float. Funds for construction of the float and landing platform were contributed by the U. S. Forest Service, the U. S. Bureau of Fisheries and the Alaska Game Commission.

3E—One-half mile of road was surfaced and 22 metal culverts installed.

14B—A fence, constructed of concrete posts connected by cable, was completed around the cemetery.

44B—The area was cleared, leveled and sowed to grass. Leveling required the moving of 9,000 cu. yds. of material. A brush dyke was constructed along a part of the west side of the field to prevent encroachment by the Skagway River.

**EAGLE SUB-DISTRICT.**

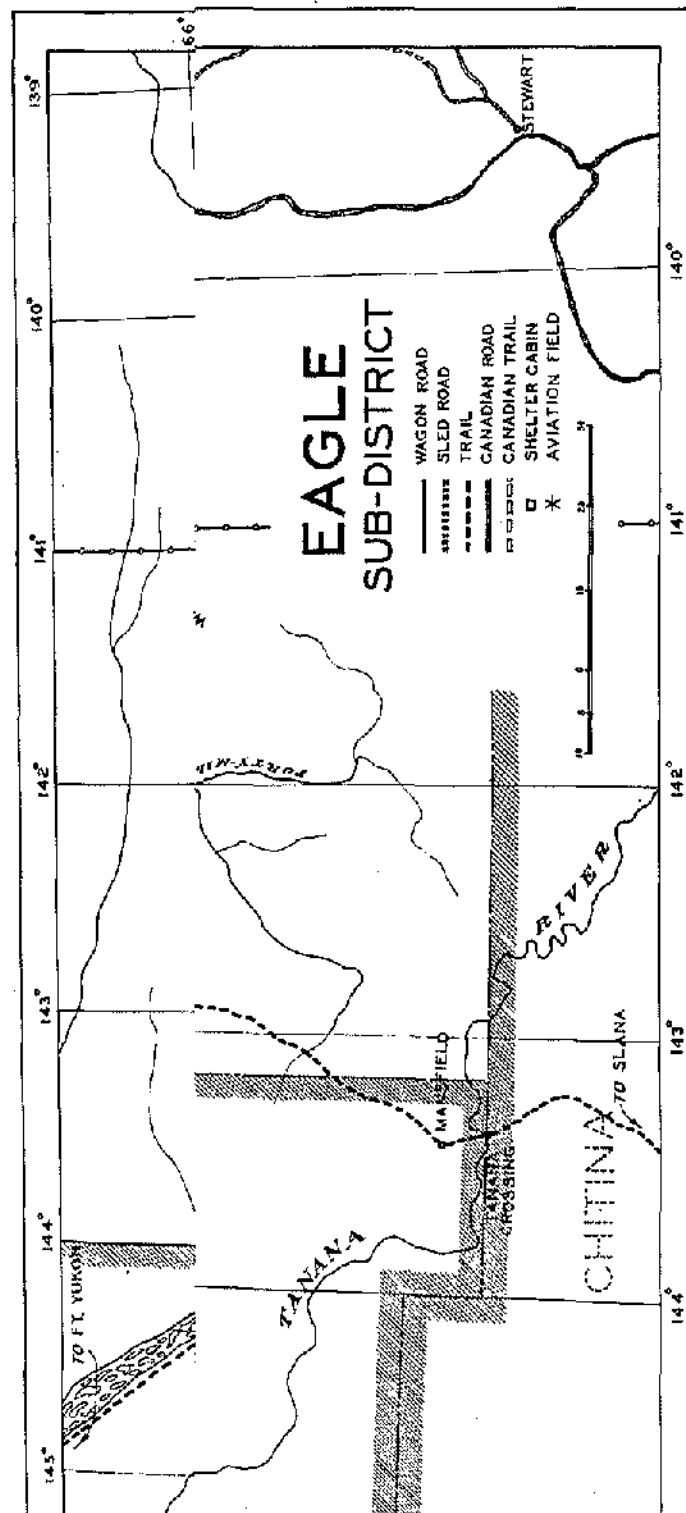
Supervised from the Juneau Office.

D. F. Millard, General Foreman in Charge, Eagle.

July 1 to October 31, 1930.

June 1 to June 30, 1931.

This sub-district includes that part of the Territory north of 63° 30' north latitude and east of the 144th meridian. It includes a region of early development in the history of Alaska. During the past few years, no extensive development has occurred. The system of winter sled roads and summer trails giving access from Eagle to the







Fortymile and Seventymile districts, includes the most important projects within the sub-district.

All projects in this sub-district are supported by the Alaska Road Commission exclusively, with the exception of shelter cabins and aviation fields which are supported by the Territory exclusively.

#### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road	Sled Road	Trail	Total Miles
11A	Eagle-Liberty	17	10	...	27
11AA	American Summit-Liberty	...	...	12	12
11B	Liberty-Fortymile	...	23	...	23
11C	Steel Creek-Jack Wade	...	15	...	15
11CC	Steel Creek-Jack Wade	...	...	15	15
11D	Steel Creek-Walker's Fork	...	27	...	27
11E	Eagle-Seventymile	4	16	40	60
11F	Jack Wade-Chicken	...	...	20	20
11G	Steel Creek-Canyon Creek	...	...	5	5
11H	Liberty-Dome	...	...	10	10
11I	Dome-Steel Creek	...	...	12	12
11J	Fortymile-Franklin	...	30	...	30
11K	Fortymile-Steel Creek	...	8	...	8
11L	Franklin-Chicken	...	10	...	10
11LL	Franklin-Chicken	...	20	...	20
11M	Jack Wade-Walker's Fork-Boundary	...	...	18	18
11MM	Jack Wade-Mouth Walker's Fork	...	12	...	12
11N	Lillywig Creek	...	1 1/4	...	1 1/4
11P**	Chicken Aviation Field	...	...	...	...
11Q**	Eagle Aviation Field	...	...	...	...
5I	Eagle-Circle	...	...	160	160
65D	Kechumstuk-Tanana Crossing	...	...	60	60
65E	Chicken-Kechumstuk	...	...	28	28
85	Fourth of July Creek	5	5	...	10
87	Woodchopper Creek	...	...	8	8
90D**	Shelter Cabins, 4th Division	...	...	...	...
Totals		26	177 1/4	368	591 1/4

(\*\*) Entirely supported by Territorial Funds.

#### DESCRIPTION.

For detailed description see Part II Annual Report for 1929. The following additions and changes should be noted:

11A—Classification of mileage on this route changed to 17 miles road, 10 miles sled road.

11P—The area was enlarged to total length of 1,200 ft., width varying from 187 ft. to 320 ft.

11Q—The area was enlarged to length 1650 ft., width varying from 350 ft. to 720 ft.

#### OPERATIONS DURING THE YEAR.

The operations other than routine maintenance are summarized by sub-projects as follows:

11A—Three bridges totaling 108 lin. ft. were rebuilt.

11P—This field was extended 200 ft. and widened to 320 ft. at center.

11Q—Two buildings were removed from the area, the ground leveled and cellars under buildings filled. The additional area provides for a diagonal runway of 1,100 ft.

### VALDEZ DISTRICT.

T. H. Huddleston, Supt., Valdez.

This district embraces that portion of Alaska lying between 145° 10' and 147° west longitude and extending south from 60° 49' north latitude.

The principal work within this district is the maintenance and improvement of the Richardson Highway from Valdez, which is the northernmost open all-year-round port in Alaska, to Willow Creek, a distance of 92 miles. This section of the Richardson Highway passing through Keystone Canyon and across the summit of the Coast Range is probably the most scenic route in Alaska and has required the most expensive construction.

The Richardson Highway is supported by the Alaska Road Commission exclusively. Other expenditures in this district were either upon cooperative projects or exclusively Territorial projects.

#### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road Miles
4BA	Valdez-Ptarmigan Drop .....	33
4BB	Ptarmigan Drop-Ernestine .....	30
4C	Ernestine-Willow Creek .....	29
38*	Valdez-Mineral Creek .....	8
38A**	Granby Road .....	5
38B**	South Second Street, Cordova .....	4
60**	Valdez Dyke .....	—
60A**	Valdez Aviation Field .....	—
60B**	Upper Tonsina Aviation Field .....	—
78	Valdez Depot .....	—
	Total .....	106 3/4

(\* ) Cooperative with Territory of Alaska.  
(\*\*) Entirely supported by Territorial Funds.

#### DESCRIPTION.

For detailed description see Part III Annual Report for 1929. The following changes and additions should be noted:

60B—This landing field, 250 ft. by 1,000 ft., is located along the Richardson Highway west of the Upper Tonsina Roadhouse, Mile 80 from Valdez.

### OPERATIONS DURING THE YEAR.

The important operations other than routine maintenance are summarized by sub-projects as follows:

4BA—Two and three-fourths miles of road were widened by grader, one-half mile by gas shovel and 1160 feet in solid rock. 12,083 cu. yds. of gravel were placed as surfacing on 8 1/2 miles. 402 lin. ft. of sheet pile control dyke were constructed and 66 lin. ft. of frame bent trestle built. 80 metal culverts were placed.

4BB—1,650 lin. ft. of road (relocation) were constructed in Mile 34. 3,480 cu. yds. solid rock and 1,718 cu. yds. earth were excavated. One 38-ft. "A" truss was erected and 9 metal culverts installed.

4C—12 metal culverts were installed.

60—784 lin. ft. of 30-foot fascine mattress was placed on upper portion of dyke to protect sections subject to attack by the glacier stream. 1,127 lin. ft. of brush and rock rolls 2 feet in diameter enclosed in wire were placed to stop scour at toe of dyke. 976 cu. yds. of material were placed to raise low sections of dyke. The town of Valdez cooperated in the latter work, placing 687 cu. yds. of material.

60A—An area 250 ft. by 500 ft. was cleared and grubbed. This together with existing field affords a cross runway 250 ft. by 940 ft. for winter landing. The town of Valdez constructed a public hangar 40 ft. by 50 ft.

### CHITINA DISTRICT.

R. J. Shepard, Superintendent, Chitina.

Frank Shipp, Asst. Superintendent, Chitina.

Wm. J. Niemi, Asst. Engineer, Chitina.

This district includes that part of Alaska lying between the 141st and 147th meridians, west longitude, and south 63° 30' north latitude, with the exception of the area west of 145° 10' west longitude and south of 61° 49' north latitude which comprises the Valdez district.

The most important projects within the district are the Richardson Highway extending from Chitina on the Copper River and Northwestern Railway up the Copper and Gulkana River Valleys and then across the Alaska Range through Isabelle Pass to Rapids on the Delta River, and the Gulkana-Chisana route now under construction.

The Richardson Highway and all other projects in this district are supported by the Alaska Road Commission exclusively with the exception of the McCarthy-Dan Creek Road, the Kotsina and Mizina-Chitina River trails which are supported by the Alaska Road Commis-

ston and the Territory jointly, and the Strelina-Kuskulana Road, the Chitina Native School Road, Aviation Fields and Shelter Cabins which are supported by the Territory exclusively.

SUMMARY OF SUB-PROJECTS.

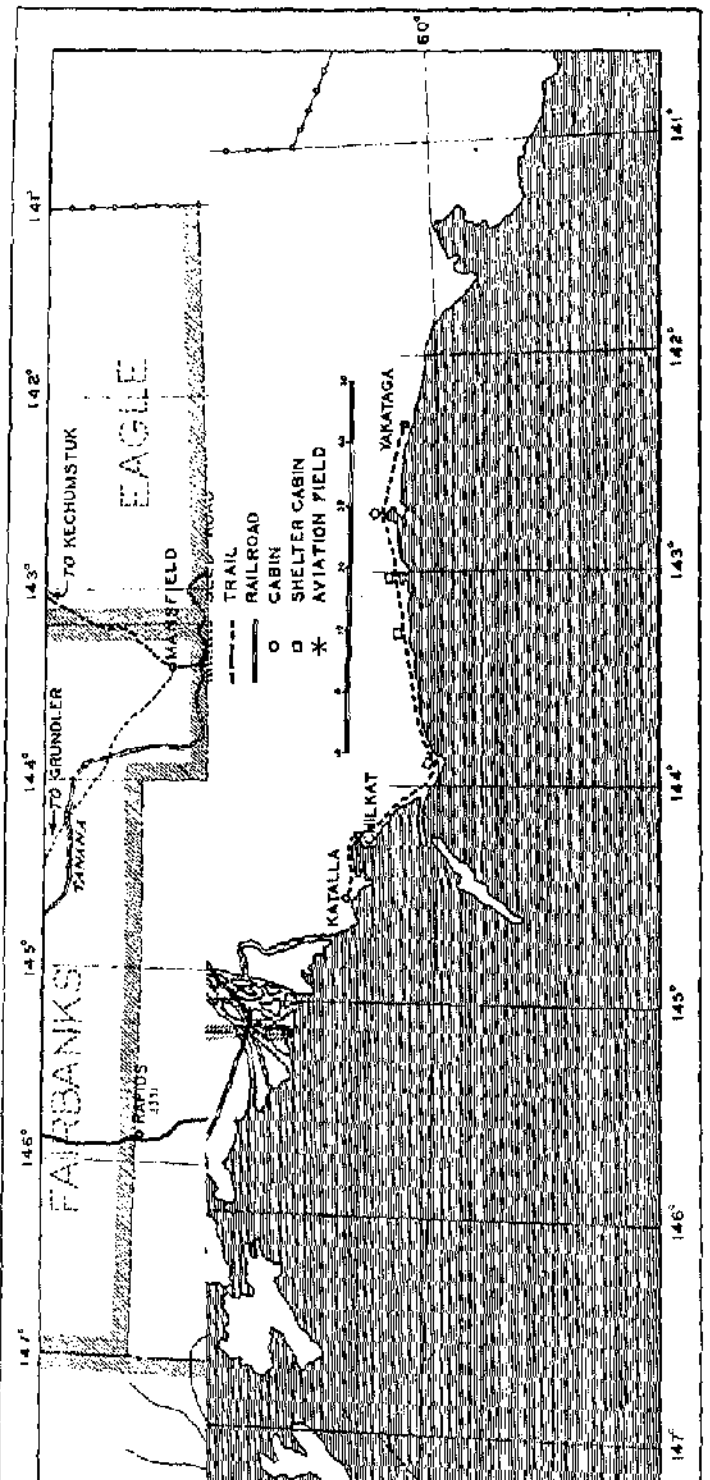
Sub-Project No.	Name of Sub-Projects	Road	Trail	Total Miles
6D	Chitina Depot	.....	.....	.....
6E**	Chitina-Native School	1	.....	1
6F**	Lower Tonsina Aviation Field	.....	.....	.....
6G**	Copper Center Aviation Field	.....	.....	.....
6H**	Chitina Aviation Field	.....	.....	.....
6B	Chitina-Tonsina	15	.....	15
5A	Tonsina-Willow Creek	24	.....	24
4D	Willow Creek-Gulkana	36	.....	36
4E	Gulkana-Sourdough	21½	.....	21½
4F	Sourdough-Mile 168	18	.....	18
4G	Mile 168-Delta River	38	.....	38
4HI	Delta River-Rapids	25½	.....	25½
30CA**	Cordova Aviation Field	.....	.....	.....
54	Nizina-Chisana	.....	78	78
54A**	Chisana Aviation Field	.....	.....	.....
54B**	Nabesna Aviation Field	.....	.....	.....
56A	Katalla-Yakataga	.....	60	60
57*	McCarthy-Dan Creek	20	.....	20
57A	Nizina River Bridge	.....	25	25
57B*	Nizina-Chitina River	.....	.....	.....
57C	McCarthy-Kennecott River	.....	.....	.....
57D	Chitina Branch	6	.....	6
57E	Green Butte Road	15	.....	15
57F**	McCarthy Aviation Field	.....	.....	.....
57G	Copper Creek Trail	.....	3	3
57H**	Upper Chitina Aviation Field	.....	.....	.....
61**	Strelina-Kuskulana	12½	.....	12½
61A*	Koisina Trail	.....	30	30
61B*	Nugget Creek Extension	5	.....	5
61F	Bremner Trail	.....	10	10
65A	Gulkana-Chistochina	.....	30	30
65B	Chistochina-Slate Creek	37	.....	37
65C	Chistochina-Tanana Crossing	6	134	140
65G	Siana-Chisana	.....	97	97
65K**	Chistochina Aviation Field	.....	.....	.....
90C**	Shelter Cabins, 3rd Division	.....	.....	.....
Totals		282	507	789

(\*) Cooperative with Territory of Alaska.  
 (\*\*) Entirely supported by Territorial Funds.

DESCRIPTION.

For detailed description see Part II Annual Report for 1929. The following changes and additions should be noted:

- 54A—This landing field, 150 ft. by 1,000 ft., is located just north of the village of Chisana.
- 54B—This landing field, 200 ft. by 900 ft., is located on the west side of the Nabesna River opposite the mouth of Jack River.
- 57D—Length of this road extended to 6 miles.
- 57F—This landing field, located on the high bench ¼ mile east





of McCarthy, has one main runway 400 ft. by 1200 ft. and a cross runway 200 ft. by 300 ft.

57G—This summer trail extends from Dan Creek over a ridge to mining operations on Copper Creek.

57H—This landing field, 130 ft. by 1000 ft., is located on a bar in the upper Chitina River opposite the mouth of Marble Creek.

61F—This trail extended. Total length 30 miles.

65A—This road is under construction. Length of usable road is 37 miles.

65K—This landing field is located adjacent to the Gulkana-Chistochina road at Mile 34. It is an irregular shaped area 1325 ft. on west side, 1150 ft. on east side, 375 ft. on north end and 200 ft. on south end.

#### OPERATIONS DURING THE YEAR.

The important operations other than routine maintenance are summarized by sub-projects as follows:

4D—1276 cu. yds. of gravel were placed as resurfacing and 7 metal culverts installed.

4E—5 metal culverts were installed.

4G—7.3 miles of road were regraded and widened to standard. 19,256 cu. yds. of gravel were placed as surfacing and filling over 11 miles. 3420 cu. yds. of material were end hauled by scraper and 72 metal culverts installed.

4H1—6.7 miles of road were regraded and widened to standard. 6094 cu. yds. of surfacing material were placed and 7817 cu. yds. of bank material were overcast by shovel in widening. 2300 cu. yds. of material were handled by power scrapers and 43 metal culverts installed. Three 38-ft. "A" truss spans and one 20 ft. stringer span were erected.

6B—The brush dyke for bank protection on the south bank of the Tonsina River was extended upstream 1390 ft.

6G—This field was widened to 300 feet on the north end.

6H—A detailed survey and map were made of the site of this proposed aviation field.

54A—Timber was cut on the north approach and additional leveling performed.

54B—Large stones were removed and depressions filled.

57—6.5 miles of road were regraded, 3247 cu. yds. of surfacing were placed on 5.3 miles, 12 metal and 5 timber culverts were installed.

57D—1500 lin. ft. of road (relocation) were constructed in Mile 2, ½ mile of new road graded in Mile 5 and ¼ mile of right of way was cleared in Mile 6 in preparation for grading.

57F—A cross runway 200 ft. by 1000 ft. was cleared and grubbed. Of this area 200 ft. by 400 ft. was leveled. An extension to the original field 200 ft. by 200 ft. was cleared and leveled.

57G—2700 lin. ft. of trail were cleared and graded 4 feet wide along a steep mountainside, connecting Dan Creek with an old trail to Copper Creek.

57H—An area 180 ft. by 1000 ft. was leveled. Markers were placed.

65A—4 miles of new road (relocation) were constructed partly along steep sidehill. 15½ miles were regraded and ditches deepened and 13½ miles were regraded and widened. Widening was performed on 2½ miles in mud sidehill between Miles 26 and 29 but this work was not completed. Sags were raised by end haul, a total of 24,925 cu. yds. being moved. 2971 lin. ft. of corduroy were placed. 100 metal and 27 timber culverts were installed.

65B—3.7 miles were cleared and grubbed 16 ft. wide suitable for winter tractor use.

65C—14.2 miles of right of way were cleared 60 ft. wide, 9 miles were grubbed 32 ft. wide and 4 miles graded to standard width. Grading on 5 miles was 60% complete. 160 lin. ft. of pile trestle were constructed, 19 metal and 11 timber culverts were installed. A log cache 24 ft. by 40 ft. and mess house 18 ft. by 24 ft. were constructed.

65G—Final road location was completed over 36 miles.

65K—The entire area was cleared, stripped and leveled.

#### INVESTIGATION AND SURVEYS.

A survey was made of Scolai Creek at its confluence with the Nizina River, thirty miles above the bridge over that stream, with a view to determining the feasibility of preventing the formation of a lake at that point. The lake so formed by the Nizina Glacier breaks annually and causes damage to the bridge below.

It was determined that any corrective measures would be doubtful of success.

### FAIRBANKS DISTRICT.

Frank Nash, Superintendent, Fairbanks.

C. E. Burglin, Asst. Engineer, Fairbanks.

This district embraces that portion of the Territory between the 144th and 152nd meridian north of the Alaska Range and between the 152nd and 158th meridian north of the 64th parallel.

The most important projects within this district are the Richardson Highway from Rapids to Fairbanks and the road to Circle, recently named the Steese Highway. The maintenance and improvement of the local road system around Fairbanks serving the mines and farms is also of extreme importance. A number of minor projects serve isolated mining communities.

The area is also well served so far as summer transportation is concerned by a number of navigable rivers, the most important of which are the Yukon, Tanana, Koyukuk, Tolovana and Kantishna. These rivers and The Alaska Railroad are the main lines of communication from which a number of short roads have been built to important mining centers.

The district has an extensive system of winter sled roads and trails, the most important of which are the route from Nenana through Fort Gibbon to Kaltag which carries the winter traffic to the Seward Peninsula, and the route from Kobl through Roosevelt to Telida and McGrath which carries the winter traffic to the Kuskokwim district.

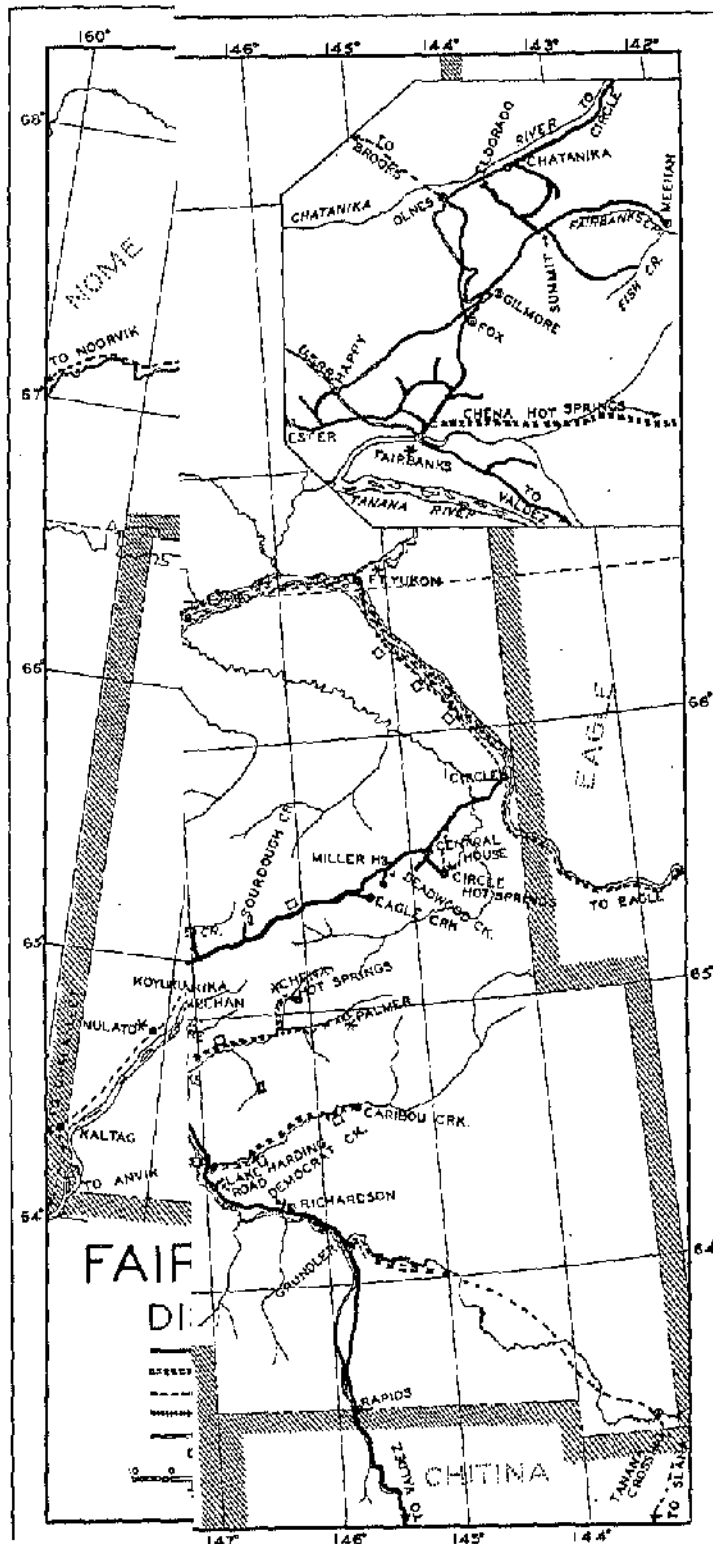
The through routes are supported exclusively by the Alaska Road Commission, less important projects by the Alaska Road Commission and the Territory jointly and purely local projects by the Territory exclusively. Shelter cabins and aviation fields are also supported by the Territory exclusively.

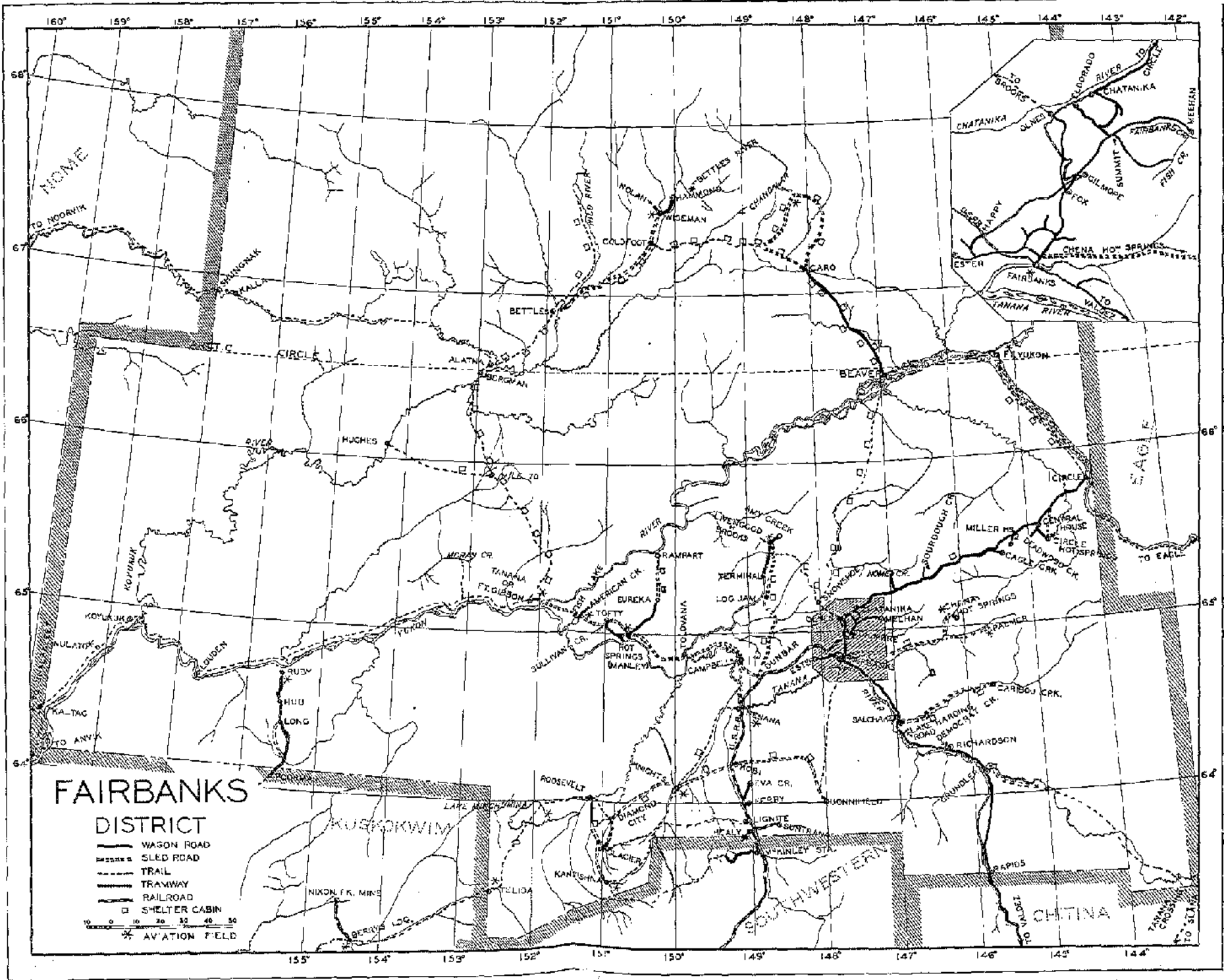
#### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road	Sled Road	Trail	Total Miles
4AA**	Richardson-Democrat Creek .....	1	3	.....	4
4H2	Rapids-Grundler .....	48	.....	.....	48
4I	Grundler-Richardson .....	20½	.....	.....	20½
4J	Richardson-Salchaket .....	30	.....	.....	30
4JA	Lake Harding Road .....	1%	.....	.....	1%
4K	Salchaket-Fairbanks .....	40	.....	.....	40
4KA	Salcha Bridge .....	.....	.....	.....	.....
5A	Dunbar-Tanana .....	2	111	.....	113
5B	Nenana-Campbells .....	.....	30%	.....	30%
5C**	Fish Lake-American Creek .....	4%	.....	.....	4%
5D**	American Creek Aviation Field .....	.....	.....	.....	.....
5E**	Tanana Aviation Field .....	.....	.....	24	24
5F	Illinois Creek-Moran Creek .....	.....	.....	.....	9½
7A	Summit-Chatanika .....	9½	.....	.....	24
7AA**	Cleary Creek .....	2%	.....	.....	13
7B**	Fox-Olmes .....	13	.....	.....	13
7EA**	Dome-Spaudling Mine .....	1%	.....	.....	1%

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70**	Summit-Fairbanks Creek	13	---	13
70A**	Summit-Fish Creek	8 3/4	---	8 3/4
70B**	Ester Creek	9 1/2	---	9 1/2
70C**	College Spur	2 1/2	---	2 1/2
70D**	Ester Dome	3 1/2	---	3 1/2
70E**	St. Patricks-Happy	1 1/2	---	1 1/2
70F**	Ester-Boegler	1 1/2	---	1 1/2
70G	Fairbanks-Gilmore	13	---	13
70GA**	Lazelle Road	2 1/4	---	2 1/4
70H**	Little Eldorado	6	---	6
70I	Gilmore-Summit	7	---	7
70J*	Fairbanks-Chena Hot Springs	64	---	64
70JA*	Chena River Branch	35	---	35
70JB**	Palmer Aviation Field	---	---	---
70JC**	Colorado Creek-South Fork	1 1/2	---	1 1/2
70K*	Olmes-Livengood	---	54	54
70N**	Farmers-Birch Hill	8 3/4	---	8 3/4
70NA**	Isabelle Creek	1 1/2	---	1 1/2
70NB**	Ballaine-Rickert	1	---	1
70R	Goldstream-O'Connor Creek	---	6	6
70T**	Graehl Bridge	---	---	---
70U**	Farmers-Chena Slough	7 3/4	---	7 3/4
70V	Wireless Road	---	---	---
70X**	Chena Hot Springs Aviation Field	---	---	---
70Y	Fairbanks Aviation Field	---	---	---
70Z	Fairbanks Aviation Field Road	---	---	---
9*	Rampart-Eureka	4 1/2	23	27 1/2
15	Circle-Miller House	47	---	47
15A*	Central House-Circle Hot Springs	8 1/2	---	8 1/2
15B	Deadwood Creek	2 1/2	---	2 1/2
15C**	Circle Hot Springs Aviation Field	---	10	10
15D	Leech Cutoff	---	---	---
15E**	Miller House Spur	---	---	---
16	Chatanika-Miller House	87	---	87
16A**	U. S. Creek Branch	7	---	7
16B**	Eagle Creek Spur	1	---	1
16C	Chatanika-Miller House	---	87	87
16D**	Sourdough Creek Branch	4 3/4	---	4 3/4
17	Tanana-Kallag	---	257	257
17C**	Nulato Aviation Field	---	---	---
17D**	Tanana-Koyukuk Station Telephone Line	---	---	---
22*	Hot Springs-Sullivan Creek	10	---	10
23A*	Snowshoe-Beaver	---	117	117
23B	Beaver-Caro	75	---	75
23C	Big Creek	---	24	24
23D	Caro-Flat Creek	---	45	45
23E	Caro-Coldfoot	---	23	55
23F**	Chandalar Aviation Field	---	---	---
29	Tanana-Bettles	---	106	106
29A	Bettles-Coldfoot	---	---	---
29C	Mile 70-Hughes	52 1/2	---	52 1/2
29D	Wild River Trail	---	60	60
29E**	Bettles River Aviation Field	---	57	57
30*	Hot Springs Landing-Eureka	---	---	---
30A	Hot Springs-Toity	24	---	24
30B**	Manley Hot Springs Aviation Field	16	---	16
31	Caribou Creek	---	60	60
33A	Ruby-Long	28 1/2	---	28 1/2
33B	Long-Poorman (summer)	28	---	28
33BEB	Long-Poorman (winter)	---	29	29
33K**	Ruby Aviation Field	---	---	---
33L**	Ruby Aviation Field Road	1 1/4	---	1 1/4
46	Kobi-Eureka	---	95	95
46A	Roosevelt-Kantishna	6	28	34
46B	Lignite-Kantishna	---	---	---
46C	Nenana-Knight's Roadhouse	---	85	85
46E	Diamond-Tellda	---	41	41
46F*	Nenana Cemetery Road	---	93	93
46G	Kobi-Bonifield	2 1/2	---	2 1/2
46H**	Lake Minchumina Aviation Field	45	---	45
46J**	Kantishna Aviation Field	---	---	---
46K**	Tellda Aviation Field	---	---	---
46M**	Nenana Aviation Field	---	---	---









65H—This landing field is located on the left limit of the Tanana River opposite the village of Tanana Crossing. It is 300 ft. by 800 ft. with a cross runway 300 ft. by 600 ft.

#### OPERATIONS DURING THE YEAR.

The important operations other than routine maintenance are summarized by sub-projects as follows:

4H2—Miles 233 to 236 were regraded and widened. 4600 cu. yds. were excavated, 866 cu. yds. of surfacing material were placed on 1½ miles, one 15-foot trestle bridge constructed and 210 lin. ft. of metal culverts installed.

4K—Four 38-ft. "A" truss spans were constructed (renewal).

4KA—300 ft. of bank revetment were constructed replacing section damaged by high water and the revetment was extended 150 ft. upstream.

7B—This road was improved. 3 miles were regraded and widened. 5630 cu. yds. of surfacing material were placed on 4¼ miles and 11 timber culverts installed.

7C—320 lin. ft. of metal culverts were installed.

7G—9 miles were regraded, 2225 cu. yds. of surfacing material placed on 2½ miles and 300 lin. ft. of metal culverts installed.

7H—1 mile was regraded and widened.

7S—A suspension footbridge of 300-ft. span was erected across the head of Noyes Slough.

7T—2½ miles of road were grubbed and graded to narrow standard, one 60-ft. trestle bridge constructed and 3 timber culverts installed.

15—30 miles were regraded and shaped, 21,951 cu. yds. of gravel surfacing were placed on 19¾ miles, and 800 lin. ft. of metal culverts were installed.

15A—7 miles were regraded, 5574 cu. yds. of gravel were placed as surfacing on 8 miles, and 180 lin. ft. of metal culverts were installed.

15B—2½ miles were grubbed and graded to 24-ft. standard.

16—510 lin. ft. of metal culverts were installed.

16D—4½ miles were cleared, grubbed and graded to narrow standard. 1294 lin. ft. of corduroy were laid and 369 cu. yds. of surfacing placed. 18 timber culverts were installed.

30—Rehabilitation of this road included: Regrading 20 miles, plac-

ing 1429 cu. yds. of surfacing material and the installation of 200 lin. ft. of metal culverts.

38A—200 lin. ft. of metal culverts were installed.

38E—5 miles were stripped and graded, 2190 lin. ft. of corduroy laid and covered and 760 lin. ft. of metal culverts placed.

38K—An addition 200 ft. by 400 ft. was cleared, grubbed and leveled.

59A—A parts shed 37 ft. by 38 ft. was constructed adjoining the garage and a platform 27 ft. by 36 ft. for storage of oil drums was constructed adjoining the oil house.

63C—1.87 miles of new track (renewal) were constructed.

63E—An area was cleared and grubbed to provide additional length for winter landing.

90D—The following work was accomplished:

Route No.	Name and Location	Work Done	Cost
16	Montana, 83 miles from Fairbanks	New stove installed	\$ 18.00
23A	Snowshoe, 13 miles from Olnes	Repairs and new stove	58.00
23B	32 miles from Beaver	New stove pipe	1.38
23B	46 miles from Beaver	New stove pipe	1.39
28	45 miles from Tanana	New stove pipe	3.00
29	70 miles from Tanana	Freight and labor installing stove	20.00
29	106 miles from Tanana	Freight and labor installing stove	25.00
29	135 miles from Tanana	Freight and labor installing stove	35.00
29D	8 miles from Bettles	Cabin built	300.00
29D	45 miles from Bettles	Cabin built	300.00
31	98 Creek, 29 miles from Salcha	Cabin built	218.00
53	22 miles from Eagle	Stove installed	41.00
53A	Halfway, 24 miles from Circle	Stove installed	18.00
Total			\$1,133.77

#### SOUTHWESTERN DISTRICT.

M. C. Edmunds, Superintendent, Anchorage, Alaska.

Anton Elde, Assistant Superintendent, Seward, Alaska.

Fred J. Spach, Asst. Engineer, Anchorage, Alaska.

This district includes the Kenai Peninsula, the northern part of the Alaska Peninsula, Kodiak Island, and all of the territory tributary to The Alaska Railroad as far north as the northern boundary of Mt. McKinley National Park.

The Alaska Railroad, the Yentna River, Cook Inlet and other arms of the Gulf of Alaska provide through transportation for this region so that only short roads are required. A very excellent system of



65A**	Kenai Aviation Field .....			
75*	Anchorage Loop .....	19½		19½
75A**	Anchorage-Lake Spenard .....	4		4
75C**	Chester Creek Boat Landing .....	1		1
75D	Anchorage Depot .....			
75E*	McDonald Branch .....	1¼		1¼
75H**	Spenard Aviation Field .....			
75T**	Oilwell Road .....	2¼		2¼
75J**	Anchorage Aviation Field .....			
75L**	Eklutna Road .....			
75M	Anchorage Radio Road .....	¼		¼
76	Cantwell-Valdez Creek .....		55	55
76A**	Valdez Creek Aviation Field .....			
79	Seward Depot .....			
90C**	Shelter Cabins, 3rd Division .....			
90D**	Shelter Cabins, 4th Division .....			
92K	Egegik-Kanatak .....		85	85
93	Chulitna Trail .....		8	8
93A*	Bull River Trail .....		12	12
93B*	Indian River .....		9	9
93C**	Curry Aviation Field .....			
93D	Chulitna Tram .....			
94	Kodiak-Abberts .....	5		5
95	Kanatak-Becharof Lake .....	8¾		8¾
95B	Larsen Bay-Karluk River .....		3	3
95	Chickaloon-King River .....		6½	6½
95A	Chickaloon Cable .....			
95B	Chickaloon-Nelehina .....		63	63
95*	Homer Spit .....	13½		13½
95A*	Nuka Bay Trail .....		1¼	1¼
95B**	Minitchik Aviation Field .....			
95C**	Kasilof Aviation Field .....			
95D**	Kasilof Road .....	7		7
	Totals .....	257	189	509½
				955½

(\*) Cooperative with Territory of Alaska.  
 (\*\*) Entirely supported by Territorial Funds.

#### DESCRIPTION.

For detailed description see Part III Annual Report for 1929. The following changes and additions should be noted:

10B—This sub-project was included in the Forest Road System on Feb. 7, 1930 and has accordingly been dropped from the summary of sub-projects.

10D—This landing field is located north of the Radio Station Road and one mile from Seward. The field consists of two runways, the north-south runway being 200 ft. by 1400 ft. and the east-west runway 200 ft. by 1200 ft.

35B—This road extends from Palmer to Mile 11.5 from Wasilla on the Wasilla-Fishhook road. Its length is 9¼ miles. This sub-project includes 5 miles originally carried under 35B, 1¼ miles originally carried as 35T and 2½ miles of 35L.

35D—Length changed to 13 miles. ½ mile formerly part of this route now included in 35DB.

35DA—This road branches from the Willow Creek Extension, Route 35D, at Mile 3.4. It follows the left limit of Gold Chord Creek for ½ mile, thence crossing to the right limit it follows to the head

of the creek. It serves three mines, only one of which is now producing.

35DB—This new road extends down Willow Creek from the Lucky Shot mine to a sawmill at St. Peters. It is suitable for teams or tractors. An extension to Willow Station is under construction.

35I—Length this road  $5\frac{1}{2}$  miles. First  $2\frac{1}{2}$  miles from Palmer now included in sub-project 35B.

35EA—This road branches from the Bogard Road  $\frac{1}{2}$  mile from the junction of the Bogard and Matanuska Trunk Roads. It extends to the Engstrom Farm distant  $1\frac{1}{4}$  miles.

35T—This road branches from the Fishhook-Palmer road  $3\frac{1}{2}$  miles from Palmer and extends  $\frac{1}{2}$  mile to cultivated farms.

46D—This road extended to a total length of  $46\frac{1}{2}$  miles.

51E—Correct length is 35 miles.

75J—This landing field is located south of the Oilwell Road,  $\frac{1}{2}$  mile east of the Anchorage townsite. It consists of two runways, the north-south leg being 400 ft. by 2260 ft. and the east-west leg, 400 ft. by 1600 ft.

75L—This proposed road branches from the Anchorage Loop road 7 miles from Anchorage and extends along the foothills above the railroad to Eklutna.

75M—This road leads from the railroad reserve to the Anchorage Radio Station.

76A—This landing field is located on the bench on the right limit of Valdez Creek opposite discovery claim. The field consists of one 300 ft. by 1000 ft. runway.

93D—This cable passenger tram is located over the Chulitna River 25 miles below the suspension bridge on Route 98.

96E—Trail extended to 63 miles in length.

98D—This road extends from the cannery at the mouth of the Kaslof River, up the right limit of the river for a distance of 7 miles, serving a group of fur farmers. It is passable for wagon traffic.

#### OPERATIONS DURING THE YEAR.

The important operations, other than routine maintenance, are summarized by sub-projects as follows:

10D—Clearing and grubbing were completed. The north-south runway was leveled and the east-west runway 50% completed. Timber

was slashed for 500 feet on both approaches. 3100 cu. yds. were moved in leveling.

35E— $1\frac{1}{4}$  miles were regraded and widened to 32 ft. 800 cu. yds. of surfacing were placed on wet sections and 9 metal culverts installed.

35D— $\frac{1}{2}$  mile was widened and 1743 cu. yds. surfacing placed between Miles 6 and 9. 10 metal culverts were placed.

35DB— $6\frac{1}{2}$  miles were cleared, grubbed and graded 24 ft. wide. 1508 lin. ft. of corduroy were laid and 3420 cu. yds. of surfacing material placed. 54 lin. ft. of bridges were constructed and 17 metal and 24 timber culverts installed. The Willow Creek Mines Co. contributed one-fourth the cost of the work.

35E—5476 cu. yds. of surfacing were placed and 17 metal culverts installed.

35G— $\frac{1}{2}$  mile was regraded and widened.

35K— $\frac{1}{2}$  mile of road was regraded and widened to 32 feet. 1441 cu. yds. of surfacing were placed between Miles 3 and 5.

35O—1 mile was widened. 586 cu. yds. of surfacing were placed.

35RA— $\frac{3}{4}$  mile was cleared, grubbed and graded. Grading was performed to only 10-ft. width.

35T— $\frac{1}{2}$  mile was grubbed and graded. Clearing had been done by interested farmers.

46D—This project is cooperative with the National Park Service, that Service providing the larger part of the funds for its construction. During the past season grading was completed to Mile 46.6 and 75% complete from Mile 47.25 to Mile 58.75. Some preliminary stripping and drainage was performed in Mile 62. The grading included heavy sidehill work between Miles 43.5 and 46.6. A total of 16,814 cu. yds. of earth, 23,837 cu. yds. loose rock and 16,286 cu. yds. solid rock was excavated. 18,425 cu. yds. of surfacing material were placed over  $11\frac{1}{4}$  miles of road. The East Fork bridge, 182 lin. ft. of pile and frame bent trestle, was completed, the Teklinika bridge lengthened 75 ft. and one 16-ft. frame trestle constructed. 194 metal culverts were installed. Maintenance was performed over  $43\frac{1}{4}$  miles of road. This work involved repairs of extensive storm damage to roadbed and bridges.

Necessary maintenance of the road, coach road and trails was performed.

Expenditures to date are classified as follows:

Office building .....	\$ 1,777.66
Warehouse and garage, Headquarters .....	6,777.16
Cabins and caches .....	7,151.22
Trail tents .....	722.50
Trail construction .....	10,099.53
Trail maintenance .....	1,255.01
Reconnaissance .....	500.00
Road construction .....	538,181.68
Road maintenance .....	61,457.33

Total .....\$625,932.09

Fiscal year 1922.....	\$ 500.00
1923.....	2,528.90
1924.....	4,961.74
1925.....	86,738.17
1926.....	52,639.40
1927.....	17,033.02
1928.....	61,596.89
1929.....	71,351.39
1930.....	160,821.31
1931.....	167,817.27

Total .....\$625,932.09

National Park Service .....	\$599,659.52
Territory of Alaska .....	732.50
Alaska Road Commission .....	24,839.82
Contributed .....	700.25

Total .....\$625,932.09

For the current season (fiscal year 1932) \$60,000 of Park Road Funds have been allotted.

48—One mile of road from the boat landing was constructed. The work involved the excavation of 1420 cu. yds. of earth, 4666 cu. yds. loose rock and 3800 cu. yds. solid rock.

51—950 cu. yds. of surfacing material were placed.

75J—The area was again leveled and seeded to grass. Contract, for the erection of pole lines to carry light and telephone lines from the city system to the field, was completed.

75L—A definite location survey was completed over 21½ miles. 3000 lin. ft. of right-of-way were cleared 60 ft. wide.

75R—¼ mile was grubbed and graded. 364 cu. yds. surfacing material were placed and 1 metal culvert installed.

76A—The field was cleared, stripped, plowed and partially leveled.

90C—The following work was accomplished:

Route No.	Location	Work Done	Cost
20H	11 miles from Nancy .....	Repairs .....	\$ 10.00
55	46 miles from Kenai .....	New roof and repairs .....	200.00
96E	Trail Creek, 46 miles from Chickaloon .....	12 ft. x 14 ft. log cabin built.	244.42
	At the mouth of the Sustina River .....	12 ft. x 14 ft. frame cabin built .....	500.00
Total .....			\$1,054.42

96E—5 miles of trail were cleared through timber, 8 ft. wide.

98D—This road was cleared, grubbed and graded to 24-ft. standard. 172 cu. yds. surfacing material were placed. One 18-ft. bridge was constructed and 7 metal culverts installed.

## SURVEYS.

A survey was made for a trail to connect Kodiak with Kalsin Bay where an experiment station for the Department of Agriculture was located. Due to the station having been discontinued, construction of this trail has been indefinitely postponed.

## KUSKOKWIM DISTRICT.

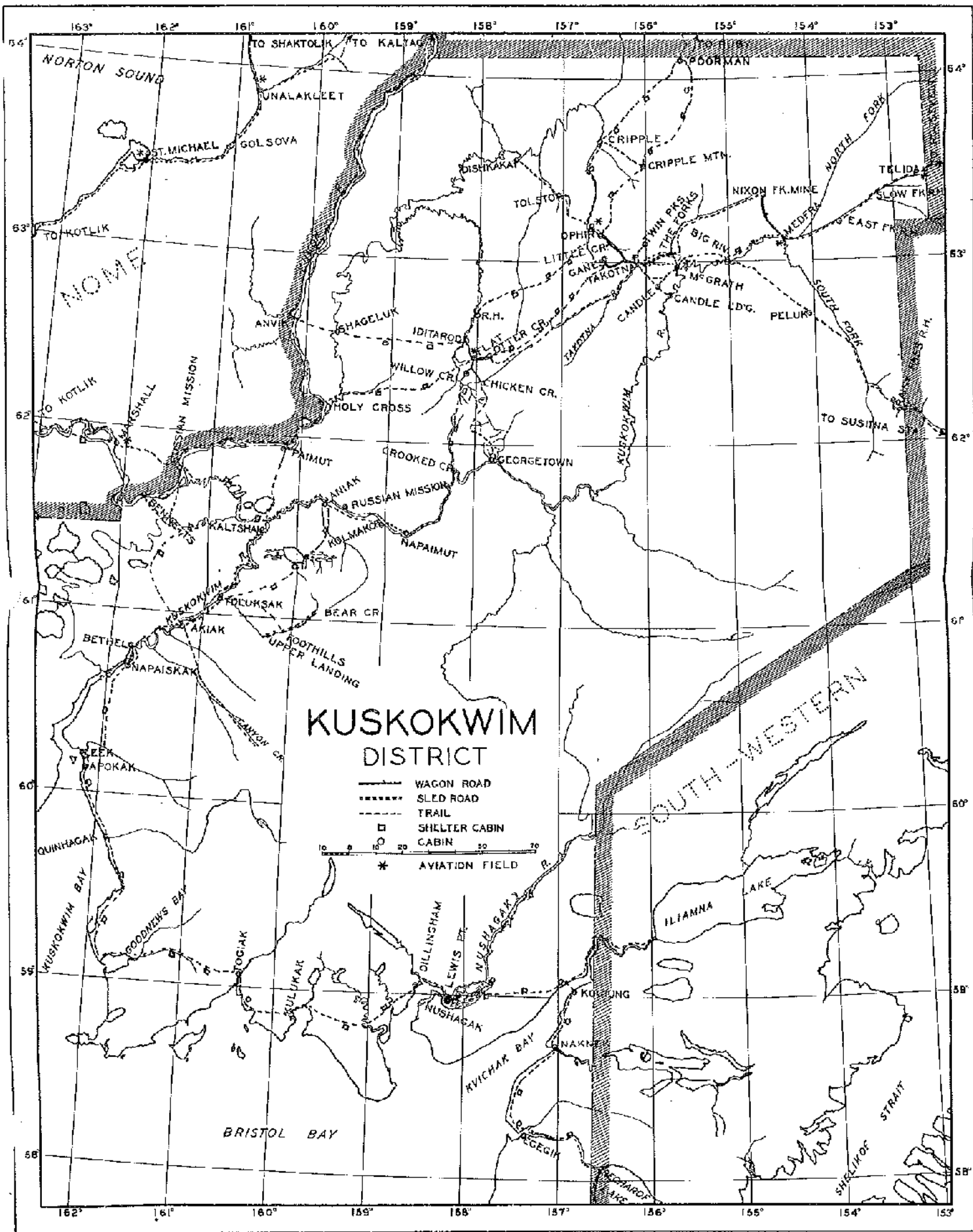
Carl Lottsfeldt, Superintendent, Takotna.

This district embraces the valley of the Kuskokwim River, extending eastward along the coast to Bristol Bay and west as far as the Yukon River, thus including the valleys of the Iditarod and Innoko Rivers. The chief mining operations are centered about Iditarod, Takotna, and Ophir.

This district comprises one of the most inaccessible parts of Alaska. Freight for Takotna and vicinity is sent by ship from Seattle to Bethel and thence by river boat up the Kuskokwim River. Freight for Iditarod and vicinity is sent by ship from Seattle to Seward, thence by rail to Nenana and by river boats, owned and operated by The Alaska Railroad, to Holy Cross. There it is transferred to smaller boats and sent up the Innoko and Iditarod Rivers. Summer mail is sent by this route. During the summer people go in by the last described route, or leave the government boat at Ruby and walk overland via Long and Poorman. During the winter mail and people enter and leave this district over the winter trail via McGrath, Telda, Diamond, Knights, and Kobi or Nenana. The limited activities within the district together with its remoteness and the great expense of road construction have prevented the construction of any through wagon or automobile routes. An important winter trail route extends from McGrath in the upper Kuskokwim Valley via Aniak, Bethel, Goodnews Bay, Togiak, Dillingham, and Naknek to Kanatak.

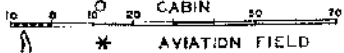
Shelter cabins, aviation fields, the Ganes Creek and Little Creek roads are supported exclusively by the Territory, the Iditarod-Flat and Ophir-Takotna Roads and the Yukon-Kuskokwim Portage by the Territory and Alaska Road Commission jointly, and the remaining projects exclusively by the Alaska Road Commission.





# KUSKOKWIM DISTRICT

- WAGON ROAD
- - - SLED ROAD
- · - TRAIL
- SHELTER CABIN
- CABIN
- \* AVIATION FIELD



SOUTH-WESTERN

BRISTOL BAY

STRAIT

Map labels include: NORTON SOUND, UNALAKLEET, ST. MICHAEL, GOLSOVA, DISHKAKA, CRIPPLE, CRIPPLE MTN., POORMAN, NORTH FORK, TELIDA, SLOW FKH, EAST FKH, NIXON FK. MINE, MEDFA, BIG RIV, THE FORKS, WIN PK, TOLSTO, OPHIR, GANES, TAKOTNA, CANDLE, CANDLE LDG., PELUR, SOUTH FORK, TO SUSITNA SEA, TO SHAKTOLIK, TO KALYAG, TO KOTLIK, ANV, SHAGELUK, IDITAROD, R.H., WILLOW CR, CHICKEN CR., HOLY CROSS, PAMUT, CROOKED CR., GEORGETOWN, KUEKOWIA, R., MAIYAK, RUSSIAN MISSION, NAPAIMUT, BEAR CR, KALTSHAK, KOKWIM, KOLUKSAK, AKIAK, BETHEL, NAPAIKAK, UPPER LANDING, QUINHAGAK, KUSKOKWIM BAY, GOODNEWS BAY, KULUKAK, DILLINGHAM, LEWIS B, NUSHAKA, NUSHAKA, KUVICHAK BAY, ANAKM, KUMJUNG, ILIANNA LAKE, KEGEGIA, RICHARDSON LAKE, STRAIT.



**DESCRIPTION.**

For detailed description see Part II Annual Report for 1923 under Kuskokwim District and Bethel Sub-District. The following changes and additions should be noted:

38M—This road was extended up Ganes Creek to total length of 15½ miles.

38M—A new location was selected for this landing field southwest of the village of Ophir .

92E—This summer portage is passable for poling boats and small power boats between the Yukon and Kuskokwim Rivers. Two portages are crossed by steel rail trams aggregating 5934 ft. Derricks and winches are provided for handling boats on and off cars and over dams.

**OPERATIONS DURING THE YEAR.**

The important operations other than routine maintenance are summarized as follows:

32B—2155 cu. yds. of surfacing material were placed on 2.3 miles. 1 metal culvert was placed.

32BA—A survey was made and maps and estimates prepared of a plan to restore the Iditarod River to its former channel at the town of Iditarod. This survey was made for the Territory of Alaska.

32E—A frame building 24 by 30 ft. for headquarters office was constructed.

33E—½ mile was surfaced.

38D—1576 cu. yds. of surfacing material were placed on 1½ miles of road.

38DA—2 miles were regraded and 334 cu. yds. of surfacing material placed.

80H—This field was completed to provide a length of 1600 ft. and an average width of 200 ft. This season an extension of 400 ft. was added to the north end and one of 100 ft. to the south end.

90C—The following work was accomplished:

Route No.	Location	Work Done	Cost
92I	Lewis Point, 20 miles from Dillingham	Repairs	\$ 40.00
92I	Patch of Woods, 50 miles from Dillingham	Repairs and roof	78.00
92J	Halfway, 24 miles from Naknek	12 ft. by 14 ft. frame cabin	725.00
Total			\$ 843.00

90D—The following work was accomplished:

Route No.	Location	Work Done	Cost
32C	Fritz's, 33 miles from Ophir	12 ft. by 14 ft. cabin built	750.00
32D	Summit, 28 miles from Flat	New roof and repairs	53.81
32D	Bonanza, 14 miles from Flat	New stove pipe	2.50
34A	Reindeer River, 25 miles from Flat	New stove	25.00
38E	Hogans, 28 miles from Poor-man	12 ft. by 14 ft. cabin built	465.00
92A	Blackfish Lake, 23 miles from Bethel	New roof and stove	88.71
92A	Dahls, 18 miles from Eck	New roof and stove	88.72
92F	Jack Smith Bay, 15 miles from Quinhagak	New stove and pipe	14.00
92F	Indian River, 36 miles from Quinhagak	New stove and pipe	14.25
92L	Old Island Village, 23 miles from Crooked Creek	Repairs and new stove	137.50
Total			\$1,639.49

92E—The tram over the portage on Kuskokwim end was completed. 1534 lin. ft. of steel rail tram were placed. Ramps were constructed for loading boats on cars at end of trams, two controlling dams were constructed and derricks and winches installed for handling boats. Entrances to lakes and sloughs were marked with direction signs.

### NOME DISTRICT.

Ross J. Kinney, Superintendent.

E. F. Bauer, Assistant Superintendent.

This district embraces that portion of Alaska lying west of the 158th Meridian and north of the Yukon River.

On account of the length and severity of the winter, the isolated location, and the lack of timber for protection and fuel, a considerable portion of the personnel of this vicinity spend the winter outside, leaving on the last boat sailing from Nome the latter part of October and returning on the first boat in the spring, which arrives at Nome from the middle to the latter part of June. The bulk of the freight is landed at the nearest port during the open season of navigation and moved to its destination either over available wagon roads in summer or over sled roads in winter.

The most important projects are the system of local roads serving the extensive mining activities about Nome, the Nome-Shelton Tram and the connecting trail extending on through Dahl to Deering and Candle, the road from Nome to Council and Casa de Paga, and the system of winter trails extending throughout the entire District.

Shelter cabins, aviation fields and telephone lines are supported exclusively by the Territory—the Seward Peninsula Railroad exclusively

by the Alaska Road Commission. All other projects in this district are supported jointly by the Territory and the Alaska Road Commission.

### SUMMARY OF SUB-PROJECTS.

Sub-Project No.	Name of Sub-Project	Road	Sled Road	Trail	Total Miles
8*	Nome-Council	57	---	25	82
8D*	Council-Ophir Creek	12	---	---	12
8H*	Casa de Paga Road	20	---	---	20
8J*	Shovel Creek	5	---	---	5
8K**	Council Aviation Field	---	---	---	---
8L	Port Safety Aids	---	---	---	---
13A*	Nomo-Bessie	3 1/4	---	---	3 1/4
13B*	Bessie-Snake River	8 3/4	---	---	8 3/4
13BA*	Snake River-Monument Creek	---	3	---	3
13C*	Bessie-Little Creek	2	---	---	2
13CA*	Little Creek-Sunset Creek	1 1/2	---	---	1 1/2
13F*	Nome-Osborne	10 1/4	---	---	10 1/4
13K*	Bessie-Buster	7 1/4	---	---	7 1/4
13L	Nome Bouys	---	---	---	---
13M	Nome Depot	---	---	---	---
18*	Kaltag-Nome	---	280	---	280
18A*	Bonanza-Kotzebue	---	240	---	240
18B*	Golovin-Council	---	35	---	35
18D**	Unalakleet Aviation Field	---	---	---	---
18E**	Solomon Aviation Field	---	---	---	---
18F**	Golovin Aviation Field	---	---	---	---
18G**	Moses Aviation Field	---	---	---	---
18H**	Koyukuk Station-Unalakleet Telephone Line	---	---	---	---
18J*	Spruce Creek	---	1 1/2	---	1 1/2
21*	Unalakleet-St. Michael	---	68	---	68
21A**	St. Michael Aviation Field	---	---	---	---
26C*	Nome-Wireless	1/4	---	---	1/4
26D*	Center Creek Road	3 1/2	---	---	3 1/2
26E*	Submarine Paystreak	3	---	---	3
26K	Nome City Wharf	---	---	---	---
26L**	Nome Aviation Field	---	---	---	---
26M**	Telephone Lines Seward Peninsula	---	---	---	---
26N	Nome City Street	---	---	---	---
26P	Nome Harbor Lights	---	---	---	---
26*	Candle-Candle Creek	6	---	---	6
26B*	Bear Creek Trail	---	45	---	45
26C*	Candle-Kiwalik	---	18	---	18
26D**	Kiwalik Aviation Field	---	---	---	---
26E**	Candle Aviation Field	---	---	---	---
26F**	Telephone Line Reconnaissance	---	---	---	---
26G*	Candle-Radio Station	1/4	---	---	1/4
27*	Deering-Inmachuk	25	---	---	25
27A**	Deering Aviation Field	---	---	---	---
28*	Shelton-Candle	---	---	---	---
28A*	Nome-Serpentine Hot Springs	---	152	---	152
37*	Topkok-Candle	---	148	---	148
37A*	Bluff-White Mountain	---	154	---	154
37B**	Bluff Aviation Field	---	15	---	15
41*	Klana-Klery Creek	---	12	---	12
41A*	Kotzebue-Shungnak	---	200	---	200
41B*	Kotzebue-Point Barrow	---	517	---	517
41C*	Kiwalik-Noorvik	---	100	---	100
41D**	Kotzebue Aviation Field	---	---	---	---
41E**	Kobuk Aviation Field	---	---	---	---
42*	St. Michael-Kotik	---	63	---	63
49*	Davidson's Landing-Taylor	24	16	---	40
52*	Dime Creek	9	---	---	9
52A*	Haycock-Bear Creek	---	22	---	22
52B**	Haycock Aviation Field	---	---	---	---
52C*	Koyuk Aviation Field	---	---	---	---
57*	Nome-Teller	---	---	---	---
57A*	Teller-Cape Prince of Wales	---	83	---	83
			67	---	67

67B*	Teller-Bluestone	5	13	18
67C*	Teller-Pilgrim Hot Springs	...	48	48
67D*	Teller-American River	...	35	35
67E**	Teller Aviation Field	...	...	...
67F*	Tin City-Goodwin	3	...	3
67G**	Lost River Aviation Field	...	...	...
67H**	Wales Aviation Field	...	...	...
67J*	Woolley-Gold Run	...	30	30
68*	Flagging Trails	...	712	712
72*	Marshall Road	7	...	7
73A*	Kotlik-Marshall	...	148	148
73B*	Stuyahok	...	11	11
73C*	Scammon Bay Trail	...	89	89
73D**	Marshall Aviation Field	...	...	...
89A	Seward Peninsula Railroad	74	...	74
89B**	Pilgrim Aviation Field	...	...	...
89C*	Iron Creek-American Creek	...	12	12
90B**	Shelter Cabins	...	...	...
Totals		287	44½	3318
				3649½

(\*) Cooperative with Territory of Alaska.

(\*\*) Entirely supported by Territorial Funds.

#### DESCRIPTION.

For detailed description see Part III Annual Report for 1929. The following changes and additions should be noted:

13BA—This tractor road extends from the Bessie-Snake River road down Glacier Creek and across Snake River to Monument Creek.

13CA—This route extends from the end of the Little Creek road across Snake River to Sunset Creek. 1½ miles are improved to road standard.

13M—This sub-project includes the district headquarters buildings at Nome.

18D—This field now has two runways, one 250 ft by 1500 ft. and the other 200 ft. by 1200 ft.

18F—An additional field to provide for cross winds, was constructed, size 200 ft. by 1500 ft.

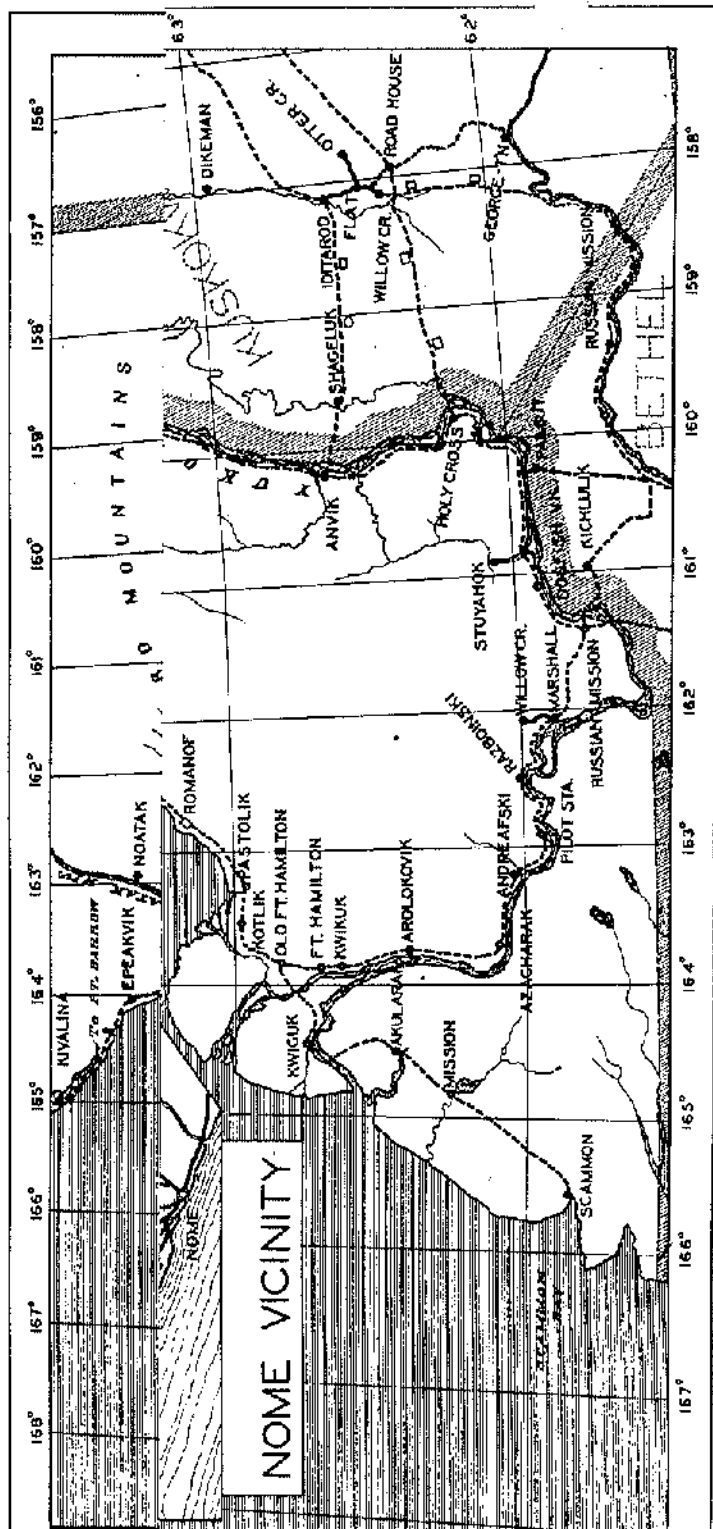
18J—This route extends from the beach, at a point 7 miles east of Solomon, 1½ miles up Spruce Creek.

21A—This is an emergency landing field 50 ft by 900 ft. and is located on the spit near St. Michael.

25D—As relocated this road branches from Route 13A at Mile 0.75 extending across the tundra to the tram, thence parallel to the tram for 1 mile, thence to dredging operations on Center Creek.

26G—This short road leads from the main street of the village of Candle to the Radio Station.

27A—This landing field is now 2,000 ft. long and varies in width from 125 to 200 ft.





37B—This landing field, 400 ft. by 900 ft., is located on the shore of Norton Sound, 3 miles east of the village of Bluff and 50 miles east of Nome.

41C—This winter trail follows the beach from Kiwalik to Elephants Point, thence along the coast and across Selawik Lake to Noorvik.

41E—This landing field is located on the Kobuk River at Kobuk Post Office, 175 miles by river above the mouth. It is 1200 ft. long and varies in width from 150 to 200 ft.

62E—This landing field is located near the village of Haycock. It is completed to 100 ft. by 925 ft. Projected field will be 150 ft. by 1400 ft.

62C—This landing field, 280 ft. by 1250 ft., is located across the Koyuk River from Koyuk Village near the outlet of the river into Norton Bay.

67E—5 miles improved to road standard, remaining 13 miles suitable for tractors only.

67C—This trail now extends from Teller to Pilgrim Hot Springs, 48 miles.

67E—A new field to provide a north and south runway 200 ft. by 1200 ft., is located on the sand spit at Teller.

67G—This landing field, 250 ft. by 1250 ft., is located on the beach  $\frac{1}{4}$  mile west of the mouth of Lost River.

67H—This landing field, 250 ft. by 1000 ft., is located  $\frac{1}{2}$  mile north of the village of Wales at Cape Prince of Wales.

67J—This winter trail extends from Cape Woolley on the Nome-Teller trail to Gold Run Creek.

73—This route extends from the landing on the Yukon River, 10 miles above Marshall, to mining operations on Willow Creek. After improvement this route is classed as road and is passable for light motor traffic.

73D—This landing field located near the village of Marshall on the Yukon River is 200 ft. by 1300 ft.

89B—This landing field, 200 ft. by 1200 ft., is located  $\frac{1}{2}$  mile south of the Pilgrim Hot Springs Mission.

#### OPERATIONS DURING THE YEAR.

The important operations, other than routine maintenance, are summarized as follows:

8--2 miles of road were reconstructed using the old railroad grade between Miles 44 and 46. A new ferry was constructed for use at Bonanza River crossing.

8K--A new field, 100 ft. by 800 ft., was constructed.

13A--1612 cu. yds. of surfacing material were placed.

13B--½ mile of road was widened to 16 ft. 8 new culverts were installed.

13BA--Sufficient grading was performed to prepare this route for tractor use.

13CA--1½ miles of new road were constructed. The work included construction of two 26-ft. span bridges, installing 8 culverts and placing 1606 cu. yds. of surfacing and filling.

18--21 miles of new trail (relocation) were permanently staked and 8 miles cut through timber.

18J--Sufficient clearing and leveling were performed to permit the use of tractors on this route.

21A--An area 50 ft. by 900 ft. was cleared and marked.

25D--1230 cu. yds. of surfacing material were placed between Miles 0.5 and 1.2. 2.4 miles of new road were constructed beyond Mile 1.2. This work included handling 5850 cu. yds. of material for surfacing and filling.

25L--Culverts were installed and gravel surfacing placed where runways join roads on west and south sides of field.

25N--720 cu. yds. of surfacing were placed on Main Street. Funds for this work were contributed by the City of Nome.

26G--770 lin. ft. of corduroy were laid and 207 cu. yds. of surfacing placed.

27--330 lin. ft. of brush corduroy were laid and 2220 cu. yds. of surfacing placed. 8 new culverts were installed.

27A--This field was lengthened to 2000 ft.

41C--Stakes for permanently staking 25 miles were distributed between Kivalik and Elephants Point, to be set next season.

41E--This field was enlarged to 1200 ft. in length and from 150 ft. to 200 ft. in width.

62B--Work on this field is not complete. An area 100 ft. by 925 ft. was stripped and leveled.

67E--Additional improvements on this route included placing 1185 lin. ft. of corduroy, 238 cu. yds. of surfacing material and installing 10 culverts.

67E--The field on the spit was regraded and lengthened to 1200 ft.

67F--1000 lin. ft. of road were surfaced.

67J--10 miles of this route were permanently staked.

68--329 miles of temporary winter trails were marked with lath and flags.

73--This route was improved to wagon road standard. ½ mile of corduroy was laid and covered and 2 miles hand graded. 26 culverts were placed.

73D--This field was completed.

89E--This field was lengthened to 1200 ft.

90E--The following work was accomplished:

Route No.	Location	Work Done	Cost
18	Walla, Walla, 96 miles from Nome	Repairs and wood	\$ 91.10
18	Moses, 115 miles from Nome	Repairs and wood	73.60
18	Bonanza, 156 miles from Nome	Purchase of cabin and dog barn and repairs	233.40
18	Whaleback, 230 miles from Nome	Repairs and wood	105.00
18	Old Woman, 241 miles from Nome	New stove installed and wood	48.10
18	Ten Mile, 249 miles from Nome	Repairs and wood	65.00
18	Twenty-two Mile, 264 miles from Nome	Repairs and wood	75.00
18	281 miles from Nome	Wood	20.00
18A	Choris Pen, 135 miles from Bonanza	New pipe and wood	41.00
18A	Arctic Circle, 149 miles from Bonanza	Combination cabin and dog barn built	1,010.58
18A	Riley Wreck, 160 miles from Bonanza	Repairs and wood	60.75
21	Golsovia, 32 miles from Enal-akleet	Cabin purchased and repairs.	271.25
28A	Windy, 104 miles from Nome	Repairs	57.15
41A	Riley Channel, 23 miles from Kotzebue	Repairs, stove and wood	100.50
41A	Pitklik, 171 miles from Kotzebue	12x14 log cabin built	252.00
41B	Aniyak, 25 miles from Kotzebue	Combination cabin and dog barn built	1,013.00
41R	Okoliksook, 59 miles from Kotzebue	Wood furnished	30.00
41R	Corwin, 230 miles from Kotzebue	Repairs to dog barn	50.00
41B	Tulukuk, 251 miles from Kotzebue	Repairs to cabin	50.00
41B	Pingarorok, 403 miles from Kotzebue	Repairs to cabin	50.00

41H	Sheridan, 195 miles from	Repairs to cabin	50.00
41C	Kotzebue	Repairs, new stove and coal	300.00
41F	Nontah, 30 miles from	Additional bills	234.80
67	Woolley, 45 miles from Nome	Repairs	24.00
67	Point Barrow, 36 miles from Nome	Repairs	6.25
67A	Lost River, 26 miles from	Repairs and wood	37.50
67A	York, 54 miles from Teller	Repairs and wood	35.00
67A	Tin City, 54 miles from Teller	Wood furnished	30.00
67A	Lopp, Tarkoon, 31 miles from	Wood furnished	30.00
67A	Sheridan, 133 miles from	Wood, axe furnished	32.50
67C	Agluapak, 21 miles from Teller	Wood, axe furnished	49.99
67J	Dome Creek, 10 miles from	Combination cabin and dog barn built	875.00
73A	Herndon, 128 miles from Kotlik	14x14 cabin erected	357.00
83A	Iron Creek, 53 miles from	Repairs	13.95
83A	Hot Springs, 67 miles from	Repairs	13.95
83A	Nome	Repairs	13.95
83A	Nome	Repairs	11.20
83A	Shelton, 74 miles from Nome	Repairs	11.20
	Total		\$5,746.48

**STATEMENT OF RECEIPTS AND DISBURSEMENTS.**

This report covers vouchers received and placed in the account including June 30, 1931.

Balance on hand July 1, 1930	\$ 63,132.27
Received since from:	
War warrants	1,383,893.31
Sales and refunds	3,758.83
Reimbursements	101,972.28
Contributions	167,872.63
Total	\$1,730,236.02

**DISBURSEMENTS.**

Disbursed as per tabulated statement below	\$1,296,312.15*
Hand at close of Treasury United States balance on	63,132.27
Deposits at close of fiscal year 1931	273,609.84
Deposits of collections	39,251.76
Balance on hand June 30, 1931 in Army Account of Advances	31,730,386.02
Total	\$1,730,236.02

\* Does not include \$685.75 charged against available appropriations by direct U. S. Treasury settlements. Reimbursements and other adjustments totaling \$1,724.24 not included in tabulated statement.

**CONSOLIDATED COST STATEMENT.**

No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
1*	Prince of Wales Island	\$	\$ 63,850.26	\$	\$ 21,038.40	\$	\$ 42,811.86
2A*	Auk Bay Extension		60,404.43		12,300.30		48,104.13
2B*	Mendenhall Glacier Extension		15,150.31		7,644.87		7,505.64
2C*	Eagle River Extension		14,362.32		3,360.00		15,002.32
2D*	Juneau-Duck Creek		108,658.27		31,250.55		78,407.72
2E	Castneau Channel Bar	220.00	29,707.83	220.00	1,146.00		28,621.83
2F	Gold Creek Bridge, Juneau		2,156.75				2,166.75
2G	Alaska Juneau Mine Trail		831.66				831.66
2H	Juneau Wharf	476.21	30,692.52	476.21	476.21		30,216.31
2J	Juneau Flout	5,134.42	5,134.42			5,134.42	5,134.42
3A	Haines-Weils	4,214.07	237,162.07	4,214.07	112,582.08		123,629.99
3B	Pleasant Camp Extension	1,515.43	165,024.52	1,515.43	22,830.33		142,194.20
3C	Porcupine Extension		47,834.63		9,279.73		38,354.90
3D	Haines-Mud Bay	1,920.11	31,948.54	1,920.11	13,141.08		18,807.46
3E	Haines-Chilkoot	2,482.66	20,108.72	1,002.66	1,872.16	1,480.00	13,235.66
3F	Haines-Jones Point		2,318.45		755.00		1,563.45
4A**	Donnelly-Washburn		33,460.06		14,694.66		18,865.40
4AA	Richardson-Democrat Creek		2,320.69				2,320.69
4AB	Donnelly Aviation Field	123.31	123.31			123.31	123.31
4BA	Valdez-Ptarmigan Drop	56,440.85	1,031,182.07	56,440.85	560,433.12		470,558.55
4BB	Ptarmigan Drop-Ernestine		442,137.53		270,910.07		171,227.56
4C	Ernestine-Willow Creek		358,695.03		3,623.40		177,499.86
4D	Willow Creek-Gulkana	9,852.74	588,784.37	9,852.74	342,388.79		246,394.58
4E	Gulkana-Sourdough		366,000.01		2,048.00		144,173.70
4F	Sourdough-Mile 168	2,170.43	304,169.76		3,170.43		136,368.29
4G	Mile 168-Delta River	44,358.96	518,060.61	44,358.96	359,444.72		168,615.89
4H1	Delta River-Rapids	4,385.22	423,782.13	4,385.22	423,796.63		269,966.60
4H2	Rapids-Grandler	15,842.66	368,036.81	15,842.66	247,710.69		120,386.12
4I	Grandler-Richardson	1,611.26	344,867.86	1,611.26	233,563.86		121,294.00
4J	Richardson-Salchaket	5,488.73	445,387.07	5,488.73	229,349.06		215,613.01
4JA	Lake Harding Road		289.83		1,962.48		3,100.75
4K	Salchaket-Fairbanks	10,952.12	536,740.73	10,952.12	281,777.86		261,982.87
4KA	Salcha Bridge	7,114.20	76,051.22	7,114.20	26,280.65		50,370.67
5**	Estler-Dunbar		19,405.13		6,781.00		12,621.18
5A	Dunbar-Tanana	1,194.21	88,433.43	1,194.21	33,163.74		50,269.69
5B	Nemana-Campbells		2,025.61		106.60		1,919.01
5C	Fish Lake-American Creek		7,504.43		1,734.00		5,766.53

No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
5D	American Creek Aviation Field		940.00				940.00
5E	Tanana Aviation Field	185.20	4,085.18	185.20	185.20		3,899.96
5F	Illinois Creek-Moran Creek		1,178.89				1,178.89
6A	Willow Creek-Tonsina	5,905.62	225,674.89	5,905.62	116,014.11		109,660.78
6B	Tonsina-Chitina	6,613.78	340,033.08	6,613.78	194,679.39		145,362.49
6D	Chitina Depot	893.20	14,452.89	893.26	2,514.23		11,935.66
6E	Chitina-Native School		699.66		104.60		495.06
6F	Lower Tonsina Aviation Field	356.99	1,637.16			356.99	1,637.16
6G	Copper Center Aviation Field	67.24	267.83	67.24	67.24		200.59
6H	Chitina Aviation Field	110.85	110.85			110.85	110.85
7A	Summit-Chatanika	1,973.51	70,189.91	1,973.51	35,427.20		40,762.71
7AA	Clarys Creek	1,126.10	3,188.75	1,126.10	3,270.94		4,317.81
7B	Fox-Olmes	14,698.02	49,800.04	14,698.02	21,708.89		28,091.60
7BA	Dome-Spaulding Mine	58.80	3,220.31	58.80	380.94		2,839.37
7BB*	Fox-Steel Creek		855.76				855.76
7C	Summit-Fairbanks Creek	2,258.83	61,151.62	2,258.83	26,249.01		34,902.61
7CA	Summit-Fish Creek	703.30	16,361.39	703.30	3,560.57		12,790.82
7D	Ester Creek	2,876.88	81,874.11	2,876.88	43,217.18		38,656.93
7DA	College Spur	426.61	1,363.27	426.61	833.27		530.00
7DB	Ester-Dome	18.02	4,674.81	18.02	482.08		4,192.73
7DC	St. Patricia-Happy	83.87	6,334.86	83.87	815.39		6,069.47
7DD	Ester-Bearder		1,000.00				1,000.00
7E*	Vault Creek		4,375.20		152.37		4,702.83
7F*	Vault Creek-Treasure Creek		1,379.09		29.09		1,350.00
7G	Fairbanks-Gilmore	17,117.72	166,110.25	17,117.72	95,707.60		70,402.75
7GA	Lazelle Road	555.91	5,863.54	555.94	1,740.03		4,113.51
7H	Little Eldorado Creek	574.98	12,048.69	574.98	3,470.39		8,678.31
7I	Gilmore-Summit	1,333.79	46,319.83	1,333.79	27,156.61		19,163.32
7IA**	Gilmore Creek		1,562.00				1,562.00
7J	Fairbanks-Chena Hot Springs	1,119.05	16,804.16	1,119.05	3,771.56		8,032.59
7JA	Chena River Branch	46.00	1,471.66	46.00	857.64		614.01
7JB	Palmer Creek Aviation Field	250.00	825.00	250.00	250.00		675.00
7JC	Colorado Creek-South Fork		600.00				600.00
7K	Olmes-Livengood	323.12	14,990.87	323.12	2,170.30		12,820.48
7N	Farmers-Bloch Hill	574.95	24,637.66	574.95	10,236.68		14,401.37

7NA	Boubette Creek	33.75	2,484.38	33.75	809.38		1,675.00
7NB	Dallatin-Rickert	15.53	1,926.76	15.53	126.76		1,800.00
7R	Goldstream-O'Connor Creek		164.64				164.64
7S	Grasht Bridge	1,728.79	4,426.32		1,374.96	1,726.79	3,059.36
7T	Farmers-Chena Slough	4,679.95	16,601.04	1,679.95	4,402.27	3,000.00	11,198.77
7V	Fairbanks-Wireless		496.46		496.46		496.46
7X	Chena Hot Springs Aviation Field		1,739.68		60.00		1,683.58
7Y	Fairbanks Aviation Field	284.00	19,955.22	284.00	484.00		19,471.22
8	Nome-Council		760.66				760.66
8D	Council-Ophir Creek	8,943.81	417,817.80	8,943.81	332,434.34		179,382.96
8H	Casa de Paga	1,292.38	6,009.14	1,292.38	6,009.14		6,009.14
8J	Shovel Creek	1,741.52	32,181.77	1,741.52	14,742.12		17,439.65
8K	Council Aviation Field		66.55		8.05		58.50
8L	Port Safety Aids	894.64	1,399.24			894.64	1,399.24
9	Rampart-Bureka	120.00	496.50	120.00	496.50		496.50
10*	Seward-Kenai Lake	1,210.60	51,220.74	1,210.60	22,196.38		29,114.36
10A*	Seward-Redio		80,783.93		34,623.10		46,260.83
10B*	Seward-Nash		5,594.04		124.00		6,470.04
10C	Lowell Creek Flood Control		21,995.00		8,753.70		13,241.30
10D	Seward Aviation Field	8,266.02	123,961.83	8,266.02	10,724.21		113,238.62
11A	Eagle-Liberty	3,239.89	10,066.84		345.75	3,239.89	8,811.09
11AA	American Summit-Liberty	4,934.19	107,822.72	4,934.19	59,559.31		48,263.41
11B	Liberty-Forty Mile	185.50	10,023.66	185.50	3,594.51		6,429.14
11C	Steel Creek-Jack Wade	146.50	20,599.81	146.50	5,346.62		15,251.19
11CC	Steel Creek-Jack Wade (Summer)	168.50	6,624.16	168.50	1,991.66		4,632.50
11D	Steel Creek-Walker's Fork	654.25	1,314.75	654.25	1,314.75		1,314.75
11E	Eagle-Seventy Mile		6,196.79		2,096.70		4,110.00
11F	Jack Wade-Chicken	2,935.56	19,639.00	2,935.56	14,674.41		4,964.59
11G	Steel Creek-Canyon Creek	527.14	3,206.60	527.14	3,206.60		3,206.60
11H	Liberty Cabin-Dome		914.00		914.00		914.00
11I	Dome-Steel Creek	57.00	6,682.41	57.00	2,988.14		2,714.27
11J	Forty Mile-Franklin	168.00	5,420.43	168.00	4,120.43		1,800.00
11K	Forty Mile-Steel Creek		44.75		44.75		44.75
11L	Franklin-Chicken	80.00	80.00		80.00		80.00
11M	Jack Wade-Walker's Fork	49.00	1,728.75	49.00	1,728.75		1,728.75
11MM	Jack Wade-Mouth Walker's Fork		126.00		126.00		126.00
11N	Lilywig Creek		1,236.00		1,236.00		1,236.00
11P	Chicken Aviation Field		809.50				809.50
11Q	Eagle Aviation Field	475.01	2,700.14			475.01	2,700.14
		898.75	2,319.50	298.75	298.75	600.00	2,020.75



No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
12A**	12A** Mile 34-Lynx Creek		22,102.66		8,239.08		13,953.68
13A	13A Nome-Bessie	134.18	85,710.66	134.18	47,168.71		38,541.95
13B	13B Bessie-Snake River		77,347.13		47,814.06		29,533.12
13BA	13BA Sunset Creek	1,417.27	1,417.27			1,417.27	1,417.27
13C	13C Bessie-Little Creek	319.35	15,033.80	319.35	13,899.82		1,133.98
13CA	13CA Little Creek-Sunset Creek	4,705.67	4,705.67			4,705.67	4,705.67
13D**	13D** Bessie-Dry Creek		3,289.20		1,706.73		1,632.47
13E**	13E** Dry Creek-Newton		823.74		223.86		399.88
13F	13F Nome-Osborne		56,640.71		41,216.92		15,393.79
13G**	13G** Grass Gulch		1,126.73		338.04		788.69
13H**	13H** Center Creek		1,538.80		1,455.10		83.65
13J**	13J** Wander-Flat Creek		2,893.72		2,833.22		170.50
13K	13K Bessie-Buster		53,272.92		35,768.94		17,503.98
13L	13L Nome Buoys		585.00		585.00		
13M	13M Nome Depot	1,452.21	4,525.20	1,452.21	4,525.20		
14*	14* Sitka-Indian River		9,610.88		3,336.16		6,274.72
14	14 Sitka-Indian River	348.97	6,612.61	348.97	3,079.61		3,663.00
14A	14A Sitka National Monument	870.95	10,304.30	670.95	8,354.39		1,950.00
14B	14B Sitka Military Cemetery	937.47	3,180.69	337.47	4,660.60	600.00	3,600.00
14C	14C Pioneer Cemetery Road	327.23	4,354.16	327.23	1,013.14		3,341.02
14D	14D National Cemetery Road	446.87	1,792.89	446.87	1,095.42		697.47
15	15 Circle-Miller House		558,390.53		137,983.50		420,407.03
16A	16A Central House-Circle Hot Springs	7,768.82	31,297.02	3,446.83	8,790.32	4,320.00	22,500.70
16B	16B Central House-Deadwood	1,321.21	3,890.90			1,321.21	3,890.90
16C	16C Circle Hot Springs Aviation Field	251.60	1,638.10	251.60	321.60		1,316.50
16D	16D Leech Cutoff		224.73				224.73
16E	16E Miller House Spur	85.94	2,600.17	85.94	129.61		1,870.53
17	17 Chatanika-Miller House	6,858.03	654,056.26	6,858.03	175,974.87		478,081.39
18	18 U. S. Creek Branch	1,232.55	11,655.93	1,232.55	1,232.55		10,372.13
18A	18A Eagle Creek Spur	1.25	306.08	1.25	224.86		81.17
18B	18B Chatanika-Miller House (Winter)	125.20	23,190.33	125.20	8,576.59		14,614.74
18D	18D Sourdough Spur	2,764.12	2,764.12			2,764.12	2,764.12
17	17 Tanana-Kaitag	330.00	33,348.94	330.00	10,111.13		23,737.80
17A**	17A** Lewis Landing-Dishkaket		483.37				483.37
17B**	17B** Nulato-Dishkaket		735.88		250.00		485.88
17C*	17C* Nulato Aviation Field		5,011.89				5,011.89

17D	17D Tanana-Kaitag station Telephone Line	2,316.60	6,883.50	2,316.60	6,683.59		
18A	18A Bonanza-Kotzebue	2,128.93	68,777.08	2,128.93	40,639.69		28,137.39
18B	18B Golovin-Council		9,023.36		7,735.36		1,230.00
18D	18D Unalakleet Aviation Field	100.85	373.85	100.85	373.85		
18E	18E Solomon Aviation Field		1,060.27		27.60		1,041.67
18F	18F Golovin Aviation Field	323.48	452.28				95.00
18G	18G Moses Aviation Field	203.67	1,634.17		357.23		1,678.07
18H	18H Kaitag-Unalakleet Telephone Line		254.20		29.20	203.67	225.00
18J	18J Spruce Creek Road	599.65	2,454.00	599.65	2,454.00		
19**	19** Kern Creek-Knik	287.50	287.50			287.50	
19A**	19A** Kenai Lake-Kern Creek		13,891.95		3,615.73		237.50
19B**	19B** Mile 27-Mile 39, A.N.R.R.		6,833.20				10,276.22
19C**	19C** Kenai Lake-Mile 27, A.N.R.R.		741.66				6,833.20
19D**	19D** Kern Creek-Indian Creek		1,595.81				741.66
19E*	19E* Girdwood-Crow Creek		3,758.28				1,595.81
20A**	20A** Knik-Susitna		3,434.15		2,542.50		3,758.28
20B	20B Susitna-Rainy Pass		8,437.44		829.59		891.65
20C	20C Rainy Pass-Big River		32,876.98		6,598.69		7,807.86
20D**	20D** Dishkaket-Kaitag		16,438.46		1,927.39		28,278.29
20DA	20DA Takotna-Ophir (Winter)	106.75	4,290.00		1,927.39		14,509.97
20DB	20DB Ophir-Dishkaket		4,887.49	106.75	1,037.49		4,251.10
20E**	20E** Susitna-McDougal		4,335.00		760.00		3,800.00
20F**	20F** McDougal-Cache Creek		8,640.21				3,575.00
20G**	20G** Lakeview-McDougal		7,350.00		347.10		8,640.21
20H	20H Nancy-Susitna		2,675.00				7,002.90
20I	20I Susitna-Tyonek	598.20	2,772.36	598.20	2,772.36		3,675.00
20K	20K Susitna Aviation Field	1,427.12	4,071.95	1,427.12	1,427.12		
21	21 Unalakleet-St. Michael		931.10				2,643.93
21A	21A St. Michael Aviation Field		8,896.23		6,293.70		931.10
22	22 Hot Springs-Sullivan Creek	110.00	110.00			110.00	2,602.63
23A	23A Snowshoe-Beaver	2,997.70	59,814.37	2,997.70	31,990.53		130.00
23B	23B Beaver-Caro		14,163.03		3,227.58		27,623.84
23C	23C Big Creek	4,043.21	61,823.45	4,043.21	34,582.64		10,935.46
23D	23D Caro-Plut Creek		8,614.77		3,294.77		30,240.81
23E	23E Caro-Coldfoot	992.88	15,233.82	992.88	11,260.36		6,320.00
23F	23F Chandalar Aviation Field		13,167.46		6,697.59		4,923.26
24*	24* Mile 29, A.N.R.R.-Sunrise	120.00	3,335.74	120.00			7,559.87
24A*	24A* Lynx Creek-Six Mile		57,850.94		27,134.00		8,216.74
24B*	24B* Sunrise-Hope		10,882.40		27,123.09		30,727.85
25A**	25A** Cripple Creek		1,085.00		200.00		30,727.85
25B**	25B** Penny River		8,801.79		3,743.82		885.00
			1,967.08		691.05		5,067.97
							1,275.03

No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
25C	Nome Wireless	842.48	3,436.82	842.48	1,671.71		1,764.91
25D	Mouth of Center Creek	6,962.72	29,739.49	1,752.72	18,441.72	5,210.00	11,297.77
25E	Submarine Paystreak	539.20	35,118.43	539.20	10,748.10		24,370.33
26H**	Otter Creek		1,302.52		652.95		1,149.54
25K	Nome City Dock		2,905.65				2,966.65
26L	Nome Aviation Field	1,481.04	6,920.16	1,481.04	2,397.46		3,622.70
26M	Telephone Lines, Seward Peninsula	2,656.39	13,149.20	2,656.39	11,449.20		1,700.00
25N	Nome City Streets		1,319.57		647.50		
26P	Nome Harbor Lights	189.35	641.48	189.35	641.48		
26	Candle-Candle Creek	3,447.37	80,837.87	3,447.37	45,843.80		34,994.07
26A**	Kugruk River Approach		488.00		488.00		
26B	Bear Creek Trail		613.09		273.69		340.00
26C	Candle-Kiwalik		1,027.91				1,027.91
26D	Kiwalik Aviation Field		441.10		141.10		300.00
26E	Candle Aviation Field		1,355.00				1,355.00
26F	Telephone Line Reconnaissance		148.00		148.00		
26G	Candle-Radio Road	575.00	575.00			575.00	575.00
27	Deering-Inmachuk	4,737.34	95,259.49	4,737.34	64,307.59		30,951.90
27A	Deering Aviation Field	127.25	1,149.25	127.25	127.25		1,022.00
28	Shelton-Candle	99.47	12,268.05	99.47	4,061.03		8,207.02
28A	Nome-Serpentine Hot Springs	1,631.53	13,442.57	1,631.53	8,209.57		5,239.00
29	Tanana-Bettles	114.72	12,170.77	114.72	6,158.66		7,012.11
29A	Bettles-Coldfoot	5,138.46	16,490.05	5,138.46	11,270.05		5,130.00
29C	Mile 70-Hughes		2,167.02		468.45		1,708.57
29D	Wild River Trail		1,425.76		1,425.76		
29E	Bettles River Aviation Field		500.00				500.00
30	Hot Springs Landing-Eureka	10,509.24	70,437.05	10,509.24	50,011.24		20,425.81
30A	Hot Springs-Tofty	182.74	6,683.47	182.74	2,874.21		4,809.26
30B	Manley Hot Springs Aviation Field		1,165.00		25.00		1,140.00
31	Caribou Creek		13,634.62		5,053.70		8,580.92
32A	Takotna-Flat		9,247.94		3,810.65		5,437.29
32AA	Takotna-Flat	15.94	80.94	15.94	60.94		
32AB	Flat-Moose Creek		15.00		15.00		
32AC	Candle Creek-Takotna		1,316.00		1,316.00		
32H	Iditarod-Flat	5,812.00	116,928.99	5,812.00	61,042.72		55,886.27

32HA	Iditarod River Improvement	100.00	100.00				100.00
32C	Iditarod-Iditarod	348.40	7,693.35	348.40	2,593.25	100.00	100.00
32DD	Flat-Crooked Creek	430.70	5,540.79	430.70	4,060.79		5,000.00
32D	Takotna Aviation Field		160.00		150.00		1,480.00
32F	Takotna-Depot	85.50	2,380.62	85.50	437.43		
33A**	Otter Creek Towpath	3,710.47	9,829.11	405.40	2,219.84		1,043.19
33B**	Summit-Otter Creek		448.23			3,305.07	7,609.27
33C	Flat City-Flat Creek		5,047.66				448.23
33D	Head Flat Creek-Willow Creek	523.40	4,013.15	523.40	5,047.66		
33E	Willow Creek-Chicken Creek	1,012.68	5,734.76	1,012.68	4,481.75		1,242.00
33F	Flat City-Otter Discovery	2,145.60	6,085.84	2,145.69	4,585.94		1,500.00
33G	Candle Landing-Candle Creek	783.44	17,101.07	783.44	7,250.59		9,811.08
33H	Flat Aviation Field		6,572.00		975.60		5,597.00
34**	Iditarod-Dishkaket		2,900.00				2,900.00
34A	Flat-Holy Cross-Anvik	249.27	1,801.66	249.27	1,801.66		4,730.98
34B	Iditarod-Shageluk-Anvik		1,033.87		533.87		500.00
35A	Archangel Extension	994.23	30,817.20	994.23	13,619.23		17,197.92
35AA	Sherry Branch		1,768.49		649.17		1,119.32
35AB*	Fairangel Extension		104.20				104.20
35B	Palmer-Fishhook	3,402.83	38,708.88	3,402.83	14,110.96		24,687.92
35C	Palmer-Matanuska River	360.49	34,071.16	360.49	11,016.00		23,656.16
35D	Willow Creek Extension	6,832.55	105,877.95	6,832.55	67,543.81		38,134.14
35DA	Gold Chert Branch	847.04	11,433.28	847.04	847.04		10,691.24
35DB	Lucky Shot-Willow Station	25,796.69	25,796.69			25,796.69	25,796.69
35E	Wasilla-Fishhook	9,732.12	123,647.34	9,732.12	90,134.71		33,412.68
35F	Wasilla-Knik	805.55	52,102.63	805.55	26,767.06		26,435.47
35G	Palmer-Springer	243.96	3,075.94	243.96	1,602.62		1,573.32
35H	Wasilla-Palmer	1,490.27	34,189.63	1,490.27	15,112.30		19,067.23
35I	Moose-Palmer	350.00	2,386.67	350.00	493.58		1,893.09
35J	Wasilla-Matanuska	1,603.46	25,708.76	1,603.46	16,490.54		4,276.23
35K	Matanuska Trunk Road	4,351.96	39,947.15	4,351.96	24,895.69		15,051.46
35L	Palmer-Matanuska	748.07	15,233.67	748.07	6,328.97		8,404.70
35M	Houston-Willow Creek		1,212.32		372.00		840.32
35N	Fishhook-Goldmint	1,909.17	22,574.49	1,909.17	5,037.06		17,536.83
35P**	Moose-Buxter		2,218.62				2,218.62
35Q	Baldud Road	30.85	3,083.29	30.85	537.60		2,545.69
35R	Dogard Road		13,429.22		1,200.64		12,228.58
35RA	Engstrom Road	1,020.00	1,020.00			1,020.00	1,020.00
35S	Moose Creek Trail		2,118.44				2,041.01
35T	Werner Connection	486.94	486.94		77.43		486.94
35U	Moose Creek Aviation Field		481.75			486.94	481.60
35V	Fishhook Aviation Field		917.49		20.25		897.24

No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
35W	Wasilla Aviation Field		459.50				459.50
35X	Wasilla Aviation Field Road	32.72	1,168.65	32.72	32.72		1,136.94
36	Mineral Creek		60,375.73		25,069.72		35,306.01
36A	Granby Road		3,431.35		349.44		3,081.91
36B	South Second Street, Cordova		3,373.15				3,373.15
36C*	Myak Lake Road		7,735.85				7,735.85
36CA	Cordova Aviation Field		941.90		15.75		926.15
36D**	Valdez-Quartz Creek		524.75				524.75
36E**	Valdez-Glacier		616.91				616.91
36F**	Shoups Bay		3,457.25				3,457.25
37	Topkok-Candle		1,026.56		210.00		816.56
37A	Bluff-White Mountain		3,273.23				3,273.23
37B	Bluff Aviation Field		80.00				80.00
38A	Ruby-Long	7,081.58	327,393.59	7,081.58	95,373.24		132,020.35
38B	Poorman-Cripple		3,449.84		1,946.88		1,502.96
38C	Ophir-Cripple	29.53	3,957.43	25.52	2,058.43		1,899.00
38D	Ophir-Takotna	4,582.52	256,941.84	4,682.52	82,434.34		174,507.50
38DA	Little Creek Road	3,010.06	13,785.52	1,158.06	2,537.48	1,852.00	10,648.04
38E	Long-Poorman	20,958.53	150,656.32	7,340.53	33,363.76	13,618.00	117,192.56
38EE	Long-Poorman (Winter)		5,378.00		110.00		5,268.00
38EEE	Tananaek-Poorman		22,322.60				22,322.60
38F	Poorman-Ophir		3,030.44		3,030.44		
38G	Takotna Landing Field Road		8,374.63		1,000.00		7,374.63
38H	Ganes Creek Road	747.02	11,416.21	747.02	8,011.36		3,403.85
38K	Ruby Aviation Field	150.37	2,074.75	150.37	874.75		1,200.00
38L	Ruby Aviation Field Road		500.00				500.00
38M	Ophir Aviation Field		1,825.12				1,825.12
39*	Juneau-Sheep Creek		45,923.40		20,539.27		25,384.13
40*	Douglas-Gastineau Channel		18,616.55		6,696.68		12,019.87
41	Klanna-Klery Creek	80.50	3,759.07	80.50	744.31		3,014.76
41A	Kotzebue-Shungnak	333.74	3,748.13	333.74	3,743.13		
41B	Kotzebue-Point Barrow		5,918.02		1,518.00		4,400.02
41D	Kotzebue Aviation Field	746.05	1,845.05		427.50	746.05	1,417.55
41E	Kobuk Aviation Field	999.00	1,939.00			999.00	1,939.00
42	St. Michael-Kodlik		2,385.51		2,385.51		
43*	Petersburg-Stow Bay		23,406.23		9,968.56		13,437.67
44*	Skagway Valley		11,124.83		2,320.88		8,803.95
44A	Skagway Trails	200.00	15,234.83	200.00	4,775.17		11,158.71

44B	Skagway Aviation Field	3,185.53	6,785.53				6,785.53
45*	Silver Bow Basin		23,466.21			3,185.53	5,938.82
46	Kobi-Barok	269.95	16,342.80	269.95	17,527.59		12,571.63
46A	Roosevelt-Kantishna		61,688.53		3,771.17		41,962.09
46B	Lignite-Kantishna		13,130.00		19,723.34		11,962.61
46C	Nenana-Knight's Roadhouse	237.11	3,493.73	237.11	1,163.99		1,692.58
46D	McKinley Park Road	167,817.27	625,139.59	20,637.55	62,712.34	147,129.60	562,487.25
46E	Diamond-Telida	166.93	10,208.70	166.93	3,395.14		6,811.56
46F	Nenana Cemetery Road	268.25	7,558.81	268.25	3,740.13		3,818.83
46G	Kobi-Bonifield		5,707.51		60.90		5,706.61
46H	Lake Minchumina Aviation Field		900.00		150.00		750.00
46J	Kantishna Aviation Field		775.00		100.00		675.00
46K	Telida Aviation Field		850.00		200.00		650.00
46M	Nenana Aviation Field		1,042.66		332.56		800.00
47	Coldfoot-Wiseman	1,155.43	15,171.86	1,155.43	7,229.25		720.09
47A	Wiseman Aviation Field	281.82	5,810.89	281.82	1,697.44		4,113.25
47B	Nolan Branch	2,368.97	21,921.16	1,116.97	4,486.42	1,242.00	17,434.74
47C	Wiseman-Hammond	1,292.09	7,041.24	1,232.09	3,074.21		3,967.07
48	Iliamna Bay-Iliamna Lake	7,340.54	57,010.88		4,606.46		52,504.42
49	Davidson's Landing-Taylor		18,412.09		10,698.92	7,340.54	7,773.17
50*	Sitkina River		2,256.76				2,256.76
51	Talkeetna-Cache Creek	8,285.28	266,813.55	8,285.28	101,474.20		166,339.35
51A	Cache Creek Trail		4,553.11		2,283.11		2,270.00
51B	Peters Creek Trail	1,112.34	12,351.63	1,112.34	3,144.81		10,206.82
51C	Yentna-Mills Creek		5,174.80		44.36		5,130.44
51E	Mills Creek-Cache Creek	80.25	2,146.61	80.25	839.16		1,307.45
51F	Cache Creek Aviation Field		179.90				179.90
52*	Ketchikan-Ward's Cove		28,120.42		5,000.00		31,120.42
52A*	Ketchikan-Charcoal Point		15,600.43		3,000.00		12,600.43
53	Eagle-Circle	100.00	5,848.59	100.00	4,161.87		1,684.72
53A	Circle-Fort Yukon	150.00	7,852.98	150.00	3,686.41		4,166.57
53B	Fort Yukon Aviation Field		3,683.59		643.00		2,540.89
54	Chisana-Nizina	109.00	9,966.21	109.00	2,638.91		7,327.30
54A	Chisana Aviation Field	250.00	1,744.63	250.00	250.00		1,494.63
54B	Nubarna Aviation Field	524.90	2,007.48	524.90	524.90		1,476.58
55	Kenai-Russian River	1,760.58	14,186.58	1,760.58	7,626.32		6,559.26
55A	Kenai Aviation Field		901.57				901.57
55B**	Tasnuma		1,058.14				1,058.14
56B**	Katalla-Chilkat		7,762.56				7,762.56
57	McCarthy-Dan Creek	18,229.06	218,901.41	18,229.06	71,549.13		146,352.23
57A	Nizina River Bridge	8,285.44	167,975.00	8,285.44	42,033.20		125,941.80
57B	Nizina-Chitina River	329.54	6,283.81	329.54	888.04		6,400.57
57C	McCarthy-Kennecott River	55.43	441.27	55.43	441.27		
57D	Chititu Branch	1,656.62	7,644.13	456.62	1,415.65	1,200.00	8,228.48

No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
57E	McCarthy-Green Butte	373.87	2,178.42	373.87	2,178.42		
57F	McCarthy Aviation Field	1,002.11	2,925.11	202.11	344.23	800.00	2,580.88
57G	Copper Creek Trail		301.98			301.98	301.98
57H	Chitna River Aviation Field	735.00	735.00			735.00	735.00
58*	Hyder-Salmon River		63.60				63.60
59	Fairbanks Bridge	92.44	73,719.89	92.44	12,020.59		61,899.30
59A	Fairbanks Depot	2,909.37	24,083.33	806.37	5,273.33	2,103.00	18,810.00
60	Valdez Dyke	7,733.88	84,651.40	7,733.88	28,535.42		56,065.98
60A	Valdez Aviation Field	206.59	2,658.24	206.59			2,351.66
60B	Upper Tonsina Aviation Field	47.50	1,747.47	47.50	47.50		1,699.97
61	Strelina-Kuskulana		17,106.28		1,669.73		12,336.65
61A	Kotsina Trail	126.19	16,095.29	126.19	1,523.74		14,571.55
61B	Nugget Creek Extension		1,630.00		1,630.00		
61C**	Elliott-Kotsina		6,858.42				6,858.42
61E	Farnan Trail		941.96		15.80		926.16
61F	Bromner Trail	46.73	3,519.98	46.73	46.73		3,473.25
62	Dime Creek		77,696.90		33,993.94		43,702.96
62A	Haycock-Bear Creek		617.82		301.32		316.50
62B	Haycock Aviation Field		105.00				105.00
62C	Koyuk Aviation Field		27.08				27.08
63	Dunbar-Brooks	150.50	31,410.08	150.50	12,180.49		19,229.59
63B	Brooks-Livengood Creek	131.17	33,032.38	131.17	12,967.62		20,064.66
63BA	Amy Creek Branch		2,368.45		300.00		2,068.45
63C	Brooks Tram	6,314.23	63,465.39	6,314.23	45,144.09		18,311.30
63D	Brooks Aviation Field Road		713.00				713.00
63E	Livengood Aviation Field	289.50	2,614.75	289.50	460.75		2,154.00
64**	Cripple-Lewis Landing		100.00		100.00		
64A	Cripple-Cripple Mountain		653.65		261.65		292.00
64AA	Cripple-Cripple Mountain (Winter)		851.05		240.00		611.05
65A	Gulkana-Chistochina	33,501.90	304,244.66	14,501.90	60,471.15	19,069.00	243,773.50
65B	Chistochina-Slate Creek	3,928.23	4,136.73		109.50	3,928.23	4,077.23
65C	Chistochina-Tanana Crossing	9,725.74	49,178.96		92.20	9,725.74	49,084.76
65D	Kechumstuk-Tanana Crossing		1,669.82		1,669.82		
65E	Chicken-Kechumstuk		1,863.50		1,863.50		
65F	Chandler-Tanana Crossing	103.88	11,997.27	103.88	2,624.62		9,372.71

65G	Slana-Chisana	8,884.46	12,332.98		980.12	8,884.46	11,352.80
65H	Tanana Crossing Aviation Field	250.00	550.00			250.00	550.00
65K	Chistochina Aviation Field	2,067.97	2,067.97			2,067.97	2,067.97
66**	Matanuska-Chickikoon		1,268.30				1,268.30
67	Nome-Teller	793.24	10,536.80	793.24	10,236.80		300.00
67A	Teller-Cape Prince of Wales		2,943.08		2,943.08		
67B	Teller-Bluestone	1,807.53	10,250.14	592.53	4,579.69	1,215.00	5,678.46
67C	Teller-Pilgrim Hot Springs	132.73	3,116.50	132.73	1,816.60		1,300.00
67D	Teller-American River		900.34		56.67		843.67
67E	Teller Aviation Field	208.00	960.80	208.00	208.00		752.80
67F	Tin City-Goodwin	269.10	2,366.92	269.10	269.10		2,097.82
67G	Lost River Aviation Field		121.40				121.40
67H	Wales Aviation Field		121.40				121.40
67J	Woolley-Gold Run	25.00	25.00	25.00	25.00		
68	Flagging Trails	2,481.05	96,939.18	2,481.05	96,939.18		
70	Miscellaneous Surveys and Reconnaissances	2,628.32	15,344.12	1,038.76	1,038.76	1,589.56	14,305.36
72*	Wrangell Oil Dock		4,964.97				4,964.97
72A*	Wrangell Cemetery Road		8,639.22		2,350.00		6,289.22
73	Marshall Road	1,464.75	22,407.45	1,464.75	7,849.40		14,558.05
73A	Kotlik-Marshall	239.56	3,632.60	239.56	2,682.60		850.00
73B	Stuyahok		1,669.00				1,669.00
73C	Old Humilton-Seamon Bay		2,378.18		524.73		1,853.45
73D	Marshall Aviation Field	2,000.00	2,000.00			2,000.00	2,000.00
75	Anchorage Loop	4,726.35	113,784.79	4,726.35	56,781.00		57,003.79
75A	Anchorage-Lake Spenard		19,974.61		9,981.82		10,010.23
75C	Chester Creek Boat Landing	65.15	1,218.28		55.15		782.42
75D	Anchorage Depot	1,150.63	7,222.66	1,150.63	3,256.31		3,966.35
75E	McDonall Road	350.33	2,654.85	350.33	1,549.72		1,105.13
75G**	East First Street, Anchorage		1,023.46				1,023.46
75H	Lake Spenard Aviation Field		277.45				277.45
75I	Oilwell Road	977.87	6,394.78	977.87	1,804.79		4,589.99
75J	Anchorage Aviation Field	1,009.16	4,614.00			1,009.16	4,614.00
75L	Anchorage Loop-Eklutna	2,628.46	2,628.46			2,628.46	2,628.46
75M	Anchorage-Wireless Road	448.09	448.09			448.09	448.09
76	Cantwell-Valdez Creek	3.15	10,793.95	3.15	2,953.75		7,840.20
76A	Valdez Creek Aviation Field	734.50	1,337.10			734.50	1,337.10
78	Valdez Depot	560.72	5,280.56	560.72	6,205.56		
79	Seward Depot		4,114.05				4,114.05
80A	McGrath-Takotna		368.95		368.95		
80A.A	McGrath-Takotna	208.55	4,937.35	208.55	2,755.35		2,182.00
80B	McGrath-Tolda	797.97	12,122.95	797.97	4,944.64		7,178.21
80C	McGrath-Candle Creek		305.29				
80D	Nixon Fork-Nixon Mine		2,348.00				2,348.00

No.	Sub-project Name	Cost 1931	Total cost to June 30, 1931	Cost Maintenance and Improvement 1931	Total cost Maintenance and Improvement to June 30, 1931	Cost Construction 1931	Total cost Construction to June 30, 1931
89E	Takotna-Twin Peaks		213.16		100.00		113.16
89F	McDra-Nixon Mine		3,458.60		1,659.60		1,800.00
89G	Takotna-Nixon Fork		610.56		610.56		
89G*	Takotna-Nixon Fork (Winter)		183.16		183.16		
89H	McGrath Aviation Field	2,449.90	14,346.43			2,449.90	14,346.43
89J	Medfra Aviation Field		345.09		60.00		285.09
81	Good Creek-Salmon River	328.91	13,728.93	328.91	3,738.79		9,990.14
81A	Rink River		1,550.00				1,550.00
82*	Taku River		20,208.85				20,208.85
84	Fairbanks-Council Survey		41,528.75				41,528.75
86	Fourth of July Creek		4,194.66		3,033.43		1,161.23
87	Woodchopper Creek		872.00		810.00		62.00
88	Ferry-Eva Creek	391.20	21,166.88	391.20	2,306.93		18,859.89
89	Kougarok Reconnaissance		4,312.11				4,312.11
89A	Seward Peninsula Railroad	11,871.40	185,339.12	11,671.40	120,799.20		64,539.92
89B	Pilgrim Aviation Field	400.00	1,116.00	400.00	400.00		716.00
89C	Iron Creek-American River	431.25	2,186.17	431.25	431.25		1,754.92
90A	Shelter Cabins, 1st Division		340.35				340.35
90B	Shelter Cabins, 2nd Division	5,746.48	37,773.93	2,197.99	6,245.90	3,548.58	31,527.97
90C	Shelter Cabins, 3rd Division	1,597.42	24,698.47	428.00	2,307.35	1,469.42	22,391.12
90D	Shelter Cabins, 4th Division	2,778.26	41,195.03	646.26	4,990.85	2,133.60	36,201.18
91*	Yakutat		50.55				50.55
92A	Bethel-Quinhagak	381.00	2,711.21	381.00	913.71		1,797.50
92B	Bethel-Tulukak	319.00	2,738.24	319.00	1,399.75		1,478.48
92C	Akiak-Russtan Mission		1,584.00				1,584.00
92D	Hennett Cutoff		396.00				396.00
92E	Yukon-Kuskokwim Portage	4,499.50	27,461.83		936.85	4,499.50	26,515.98
92F	Quinhagak-Good News Bay	274.00	2,782.41	274.00	364.64		2,417.77
92G	Good News Bay-Togiak	153.70	2,428.57	153.70	225.24		2,203.33
92H	Togiak-Nushagak	3,959.34	10,399.29	1,708.34	4,300.82	2,250.00	6,098.47
92I	Lewis Point-Naknek	981.40	3,789.19	981.40	1,150.76		2,832.34
92J	Naknek-Pegvik	545.00	2,816.50	545.00	711.89		2,105.00
92K	Egegik-Kanatak	246.50	1,168.50	246.50	818.50		360.00
92L	Crooked Creek-Aniak	343.50	1,753.18	343.50	933.18		820.00
92M	Aniak-Tulukak	371.00	3,722.31	371.00	1,207.35		2,514.96
92N	Akiak-Canyon Creek		306.00		306.00		
92O	Tulukak-Boothills		1,444.74		259.02		1,185.12
92P	Holy Cross-Kaltshak	169.90	1,120.10	169.90	620.10		500.00

92Q	Upper Landing-Bear Creek		5,027.98		1,427.98		4,100.00
93	Chulitna Trail	61.95	3,827.44	61.95	1,871.60		6,956.44
93A	Bull River Trail		4,515.60		933.28		3,582.32
93B	Indian River		6,579.63		13.40		6,566.23
93C	Curry Aviation Field	73.20	4,217.21	73.20	840.61		3,376.60
93D	Chulitna Tram	281.52	520.37			281.52	520.37
94	Kodiak-Abberts	2,373.95	60,447.22	2,373.95	13,638.71		40,808.51
95	Kanatak-Becharof Lake	141.50	30,276.74	141.50	6,394.43		23,882.31
95D	Larsen Bay-Karluk River		962.05				962.05
96	Chickaloon-King River	110.62	1,833.68	110.62	1,033.68		800.00
96A	Chickaloon Cable		384.22		111.93		272.29
96B	Chickaloon-Nelchina	293.97	7,917.17	293.97	416.80		7,600.37
97	Suntrana Footbridge		413.80				413.80
97A	Healy Aviation Field		491.79				491.79
98	Homer Split		37,224.30		4,384.55		32,839.75
98A	Nuka Bay	9.00	5,757.75	9.00	2,106.77		3,650.98
98B	Nimlehik Aviation Field		384.18				384.18
98C	Kasilof Aviation Field		674.52				674.52
98D	Kasilof Road	10,074.13	17,146.36			10,074.13	17,146.36
100	Office and General Over-head		549,839.61	23,140.02	288,241.66	13,212.50	261,597.95
101	Territorial General Over-head		71,521.31		31,584.89		39,936.42
	Total Costs	\$ 907,576.62	\$17,825,378.24(a)	\$ 568,660.18	\$ 7,990,772.84	\$ 343,916.44	\$ 9,834,605.40
110	Book Value of Plant	129,847.81	129,847.81				
111	Supplies and Materials on Hand	259,849.03	259,849.03				
	Total Expenditures	\$ 1,288,273.46(b)	\$18,206,675.08				

\*Transferred to Department of Agriculture.

\*\*Abandoned.

(a) Includes \$932,280.46 of Supervised Funds.

(b) Includes \$685.55 General Accounting Office Settlements. Does not include \$7,721.24 miscellaneous reimbursements, refunds and receipts from sales.

### COSTS IN DETAIL—TERRITORIAL AND COOPERATIVE PROJECTS.

(Included in Preceding Table).

#### FIRST DIVISION.

Acct. No.	Name of Sub-Project	Federal	Territorial	Total
2E	Gastineau Channel Bar	\$	\$ 220.06	\$ 220.06
2J	Juneau Float	602.42	4,533.00(a)	5,135.42
3A	Haines Wells	864.18	3,349.89	4,214.07
3B	Pleasant Camp Extension	665.43	850.00	1,515.43
3D	Haines-Mud Bay	620.11	1,400.00	1,920.11
3E	Haines-Chilkoot		2,482.66	2,482.66
14	Sitka-Indian River	269.97	73.00	342.97
14A	Sitka National Monument		670.95(b)	670.95
14B	Sitka National Cemetery	937.47(c)		937.47
14C	Pioneer Cemetery Road		327.23	327.23
14D	National Cemetery Road	126.87	320.00	446.87
44A	Skagway Trails	30.00	170.00	200.00
44B	Skagway Aviation Field		3,185.53	3,185.53
81	Good Creek-Salmon River	32.14	296.77	328.91
Totals		\$ 4,048.59	\$ 17,884.03	\$ 21,932.62

(a) Includes \$1,555.66 contributed by Alaska Game Commission, \$1,445.71 by U. S. Forest Service and \$1,330.63 by U. S. Bureau of Fisheries.

(b) Contributed by National Park Service.

(c) Allotted by Quartermaster General.

#### SECOND DIVISION.

Acct. No.	Name of Sub-Project	Federal	Territorial	Total
8	Nome-Council	\$ 2,685.54	\$ 6,359.30(a)	\$ 9,044.84
8D	Council-Ophir	592.38	700.00	1,292.38
8H	Casa de Paga Road	741.52	1,000.00	1,741.52
8K	Council Aviation Field		894.64	894.64
8L	Port Safety Aids		120.00(b)	120.00
13A	Nome-Bessie	34.18	100.00	134.18
13BA	Snake River-Monument Creek	717.27	700.00(c)	1,417.27
13C	Bessie-Little Creek	181.85	137.50(d)	319.35
13CA	Little Creek-Sunset Creek	1,705.67	3,000.00	4,705.67
18	Kaltag-Nome	529.70	1,599.23	2,128.93
18E	Golovin-Council	60.85	40.00	100.85
18F	Solomon Aviation Field		323.48	323.48
18P	Nation Aviation Field		203.67	203.67
18H	Kaltag-Unalakleet Tel. Line		599.55	599.55
18J	Spruce Creek		287.50	287.50
21A	St. Michael Aviation Field		110.00	110.00
25C	Nome Wireless	242.48	100.00	342.48
25D	Center Creek Road	1,986.82	4,975.90(e)	6,962.72
25E	Submarine-Payscenk	89.20	450.00	539.20
25L	Nome Aviation Field		1,481.04(f)	1,481.04
25M	Telephone Lines, Seward Pen.		2,656.39(g)	2,656.39
25N	Nome City Streets		647.50(h)	647.50
25P	Nome Harbor Lights		169.35(b)	169.35
26	Candle-Candle Creek	947.37	2,500.00	3,447.37
26G	Candle Radio Road	215.00	360.00	575.00
27	Deering-Inmachuk	1,437.34	3,300.00	4,737.34
27A	Deering Aviation Field		127.25	127.25
28	Shelton-Candle	29.47	70.00	99.47
28A	Nome-Serpentine Hot Springs	531.53	1,100.00	1,631.53
41	Klana-Klery Creek	40.50	40.50	81.00
41A	Kotzebue-Shumanak	293.74	40.00	333.74
41D	Kotzebue Aviation Field		748.95	748.95
41E	Kobuk Aviation Field		999.00	999.00
67	Nome-Teller	513.24	280.00	793.24
67B	Teller-Bluestone	607.56	1,300.00	1,907.56
67C	Teller-Pilgrim Hot Springs	117.78	15.00	132.78
67E	Teller Aviation Field		208.00	208.00

67F	Tin City-Goodwin	129.10	140.00	269.10
67J	Wooley-Gold Run	5.00	20.00	25.00
68	Flagging Trails	771.08	1,710.00	2,481.08
73	Marshall Road	564.75	900.00	1,464.75
73A	Kotlik-Marshall	129.56	110.00	239.56
73D	Marshall Aviation Field		2,000.00	2,000.00
89A	Seward Peninsula Railroad	11,671.40		11,671.40
89R	Pilgrim Aviation Field		400.00	400.00
89C	Iron Creek-American Creek	131.25	300.00	431.25
90B	Shelter Cabins		5,746.48	5,746.48
Totals		\$ 27,693.15	\$ 48,966.83	\$ 76,660.98

- (a) Includes \$270.00 contributed by Hastings Creek Dredging Co.  
 (b) Contributed by the U. S. Lighthouse Service.  
 (c) Includes \$500.00 contributed by the S. L. B. Development Co.  
 (d) Includes \$37.50 contributed by the Dry Creek Dredging Co.  
 (e) Includes \$2,196.70 contributed by the Hammond Goldfields Consolidated.  
 (f) Includes \$297.00 contributed by the Alaskan Airways and \$84.00 by the Northern Air Transport.  
 (g) Includes \$150.00 contributed by A. V. Cordovado.  
 (h) Contributed by the City of Nome.

#### THIRD DIVISION.

Acct. No.	Name of Sub-Project	Federal	Territorial	Total
6F	Lower Tonsina Aviation Field	\$	356.99	356.99
6G	Copper Center Aviation Field		67.24	67.24
6H	Chitina Aviation Field		110.85	110.85
10D	Seward Aviation Field		3,239.89(a)	3,239.89
35E	Palmer-Fishhook	2,412.83	990.00	3,402.83
35DA	Gold Chord Branch	597.64	250.00	847.64
35DE	Lucky Shot-Willow Station	18,296.69	7,500.00(b)	25,796.69
35G	Palmer-Springer		243.96	243.96
35H	Wasilla-Finger Lake-Palmer	1,250.27	240.00	1,490.27
35I	Moose-Palmer	250.00	100.00	350.00
35J	Wasilla-Matanuska	1,303.46	300.00	1,603.46
35K	Matanuska Trunk Road	3,082.26	1,372.70	4,454.96
35L	Palmer-Matanuska		748.07	748.07
35O	Fishhook-Goldmint	1,509.17	400.00	1,909.17
35Q	Edlund Road		30.85	30.85
35RA	Kingstrom Branch		1,020.00	1,020.00
35T	Werner Branch		486.94	486.94
35X	Wasilla Aviation Field Road		32.72	32.72
54A	Chisana Aviation Field		250.00	250.00
54B	Nabesna Aviation Field		524.90	524.90
57	McCarthy-Dan Creek	13,121.50	5,170.56	18,292.06
57A	Nizina Bridge	3,285.44		3,285.44
57B	Nizina-Chitina River	239.54	90.00	329.54
57D	Chititu Branch	1,206.62	450.00	1,656.62
57F	McCarthy Aviation Field		1,002.11	1,002.11
57H	Upper Chitina River Aviation Field		735.00	735.00
69	Valdez Dyke		7,733.88	7,733.88
69A	Valdez Aviation Field		206.59	206.59
69B	Upper Tonsina Aviation Field		47.50	47.50
65K	Chistochina Aviation Field		2,067.97	2,067.97
75	Anchorage Loop	3,320.35	1,400.00	4,720.35
75A	Anchorage-Lake Spenard		708.78	708.78
75C	Chester Creek Boat Landing		55.15	55.15
75E	McDonald Branch	210.33	140.00	350.33
75I	Oilwell Road		977.87	977.87
75J	Anchorage Aviation Field		1,009.16(c)	1,009.16
75L	Elkutna Road		2,525.46	2,525.46
76A	Valdez Creek Aviation Field		734.50	734.50
80C	Shelter Cabins		1,897.42	1,897.42
93C	Curry Aviation Field		73.30	73.30
93D	Kaslof Road		10,074.13	10,074.13
Total		\$ 55,091.50	\$ 55,201.39	\$ 110,292.89

(a) Includes \$899.97 contributed by the City of Seward.

(b) Contributed by Willow Creek Mines.

(c) Includes \$507.00 contributed by the City of Anchorage.

## FOURTH DIVISION.

Acct. No.	Name of Sub-Project	Federal	Territorial	Total
4AB	Donnelly Aviation Field		\$ 123.31	\$ 123.31
5E	Tanana Aviation Field		185.20	185.20
7AA	Cleary Creek Road		1,126.19	1,126.19
7B	Fox-Olmes	14,098.02	500.00	14,598.02
7BA	Dome-Spaulding Mine		58.80	58.80
7C	Summit-Fairbanks Creek		2,353.33	2,353.33
7CA	Summit-Fish Creek		703.30	703.30
7D	Fairbanks-Ester	1,638.75	1,237.13 (a)	2,875.88
7DA	College Spur		426.61	426.61
7DB	Ester Dome		18.02	18.02
7DC	St. Patrick's-Happy		83.87	83.87
7GA	Lazelle Road		555.94	555.94
7H	Little Eldorado		574.98	574.98
7J	Fairbanks-Chena Hot Springs	619.05	500.00	1,119.05
7JA	Chena River Branch	25.00	20.00	45.00
7JB	Panner Aviation Field		250.00	250.00
7N	Farmers-Bloch Hill		574.95	574.95
7NA	Isabelle Creek		33.75	33.75
7NE	Baltaino-Rickerts		15.53	15.53
7S	Grachl Bridge		1,726.79	1,726.79
7T	Farmers-Chena Slough		4,679.95	4,679.95
7Y	Fairbanks Aviation Field		284.00 (b)	284.00
11P	Chicken Aviation Field		476.01	476.01
11Q	Eagle Aviation Field		393.75	393.75
15A	Central House-Circle Hot Springs	5,766.82	2,000.00	7,766.82
15C	Circle Hot Springs Aviation Field		251.60	251.60
15E	Miller House Spur		85.94	85.94
15A	U. S. Creek Branch		1,283.85	1,283.85
16B	Eagle Creek Spur		1.25	1.25
16D	Sourdough Creek Branch		2,764.12	2,764.12
17D	Tanana-Kaltag Telephone Line		2,346.60	2,346.60
22	Hot Springs-Sullivan Creek	1,597.70	500.00	2,097.70
23F	Chundalar Aviation Field		120.00	120.00
20	Hot Springs Landing-Eureka	3,420.63	2,988.61	10,509.24
32E	Flat-Iditarod	3,712.03	2,100.00	5,812.03
32EA	Iditarod River Reconnaissance		100.00	100.00
32E	Takotna Aviation Field		85.50	85.50
38D	Ophir-Takotna	3,182.52	1,400.00	4,582.52
38DA	Little Creek Road		3,010.06	3,010.06
38E	Ganes Creek Road		747.02	747.02
38K	Ruby Aviation Field		150.37	150.37
46F	Nenana Cemetery Road	178.26	90.00	268.26
47A	Wiseman Aviation Field		231.82	231.82
63	Dunbar-Brooks	100.50	50.00	150.50
63B	Livengood Creek Road		131.17	131.17
63C	Brooks Tram	6,023.01	285.22 (c)	6,314.23
63E	Livengood Aviation Field		239.50	239.50
65H	Tanana Crossing Aviation Field		250.00	250.00
80H	McGrath Aviation Field		2,449.90	2,449.90
90D	Shelter Cabins		2,773.26	2,773.26
92E	Yukon-Kuskokwim Portage	3,999.59	500.00	4,499.59
	<b>Totals</b>	<b>\$ 49,368.78</b>	<b>\$ 43,652.61</b>	<b>\$ 92,921.39</b>

- (a) Includes \$237.13 contributed by the Fairbanks Telephone Co.  
 (b) Contributed by the Fairbanks Commercial Club.  
 (c) Contributed by the citizens of Brooks.

## SUMMARY, BY DIVISIONS,—TERRITORIAL AND COOPERATIVE PROJECTS.

	Federal	Territorial	Total
First Division	\$ 4,048.59	\$ 17,884.03	\$ 21,932.62
Second Division	27,603.15	48,066.83	75,669.98
Third Division	56,091.50	55,201.39	110,292.89
Fourth Division	49,368.78	43,562.61	92,921.39
<b>Totals</b>	<b>\$136,112.02</b>	<b>\$165,604.86*</b>	<b>\$301,716.88</b>

\* Includes \$20,298.32 contributed by others.

## SUMMARY, BY DISTRICTS,—TERRITORIAL AND COOPERATIVE PROJECTS.

District	Federal	Territorial	Total
Southeastern	\$ 4,048.59	\$ 17,884.03	\$ 21,932.62
Eagle		1,374.76	1,374.76
Valdez		7,967.97	7,967.97
Chitina	22,853.10	10,762.82	33,615.92
Fairbanks	38,474.73	39,145.88	68,620.61
Southwestern	32,258.49	35,807.80	67,846.29
Kuskokwim	10,594.05	12,374.37	23,768.02
Nome	27,603.15	48,966.83	76,569.98
<b>Totals</b>	<b>\$136,112.02</b>	<b>\$165,604.86*</b>	<b>\$301,716.88</b>

\* Includes \$20,298.32 contributed by others.

## TOTAL COSTS—BY DISTRICTS.

District	Construction	Maintenance and Improvement	Total
Juneau Office and General Overhead (a)	\$ 13,212.59	\$ 23,140.02	\$ 36,352.62
Southeastern	10,399.85	12,003.83	22,403.68
Eagle	1,076.01	10,212.39	11,288.40
Valdez		70,853.76	70,853.76
Chitina	47,111.21	120,316.45	167,427.66
Fairbanks	31,326.43	158,019.90	189,406.33
Southwestern	202,420.59	87,466.60	289,887.19
Kuskokwim	16,396.47	25,533.27	41,929.74
Nome	21,913.28	56,108.91	78,022.19
<b>Total cost</b>	<b>\$343,916.44</b>	<b>\$563,660.18</b>	<b>\$907,576.62</b>
Plant, materials, etc. undistributed			380,696.84
<b>Total Expenditure</b>			<b>\$1,288,273.46</b>

(a) Includes expenses of sub-offices in Seattle, Washington and Washington, D. C.

\* Includes \$685.55 General Accounting Office settlements. Does not include reimbursements and receipts from Sales.

## CLASSIFICATION OF EXPENDITURES.

0110	Pay of civilian employees	\$ 732,389.99
0140	Other emoluments	1,000.00
0200	Stationery, including printed forms and letterheads	104.00
0202	Sundry office supplies	1,312.13
0203	Drafting and artists' supplies	99.16
0204	Photographic supplies	348.80
0206	Cleaning and toilet supplies	1,943.82
0210	Medical and hospital supplies	292.52
0222	Educational supplies (magazines and pamphlets)	21.07
0230	Solids, gasoline and oil, except for airplanes and motor vehicles	17,174.45
0236	Gasoline and oil for motor vehicles	55,277.93
0250	Forage, including roughage, grain, dog biscuits, meat, salt, etc.	5,896.53
0256	Horseshoes, hoof pads, collar pads, packing and dressing	1,631.73
0260	Provisions	92,114.49
0270	Explosives for blasting	8,917.02
0282	Mechanics', engineers', and electricians' supplies	8,101.04
0290	Materials not specifically allocated for use as supplies, equipment or structures at time of purchase, etc.	42,278.51
0300	Furnishing food	28,265.33
0310	Furnishing lodging	5,679.25
0320	Furnishing food and lodging (one payment)	1,302.42

0400	Animal subsistence and care of, when not in a travel status and storage and care of vehicles, when not in a travel status .....	538.31
0500	Telegraph service .....	713.18
0510	Telephone service .....	1,322.23
0520	Postal service (includes post office box rent) .....	71.00
0600	Commercial travel (rall, motor, water and air) includes sleeping car, chair car, excess baggage and tips to waiters .....	13,780.02
0610	Local travel (street car, taxi, hack, etc.) .....	125.00
0640	Subsistence, including laundry and lodging, while in a travel status .....	5,538.03
0700	Freight, and express and incidental charges (other than local) .....	73,551.58
0730	Local transportation of things, includes drayage, loading and lightering .....	3,327.73
0800	Printing and binding (job work) .....	735.12
0810	Lithographing, engraving, and engrossing .....	170.06
0830	Photographing and making photographs and prints .....	364.44
1000	Furnishing of heat .....	226.48
1010	Furnishing of light .....	2,162.75
1020	Furnishing of power .....	15.24
1030	Furnishing of electricity .....	970.69
1040	Furnishing of water .....	287.09
1100	Rent of office buildings .....	1,002.50
1112	Rent of motor equipment .....	10,745.42
1113	Rent of animal-drawn vehicles and animals .....	11,212.58
1240	Repairs to bridges, viaducts, piers and wharves .....	44.85
1280	Repairs to machinery and equipment .....	59,399.64
1373	Laundry and towel service .....	26.30
1375	Rubbish, ashes, garbage, and snow removal service .....	23.50
1380	Special and miscellaneous expenses .....	3,703.03
3010	Furniture, furnishings, and fixtures, including chairs, desks, beds, tables, etc. ....	3,339.44
3015	Kitchen, dining room, and household utensils, including crockery and cutlery .....	1,687.16
3017	Office machines and devices .....	306.13
3019	Miscellaneous equipment .....	640.80
3041	Beasts of burden .....	450.00
3051	Heat, light, power, water and refrigeration equipment .....	2,629.56
3052	Production and construction equipment .....	69,787.66
3053	Transporting and conveying equipment .....	935.57
3212	Excavations, embankments, and surfacings .....	21,150.35
	Treasury Settlements .....	\$1,295,312.15
	Reimbursements and Adjustments .....	685.55
		1,295,997.70
		7,724.24
		\$1,288,273.46

## BY APPROPRIATIONS.

From appropriations for support of War Department:		
Act of March 23, 1933, Lowell Creek .....	\$	8,399.96
F. Y. 1930-1931, Act of May 28, 1930 .....		653,002.46
F. Y. 1931-1932, Act of February 23, 1931 .....		89,963.66
National Cemeteries, F. Y. 1930 .....		143.32
Cemeterial Expenses, W. D. 1931 .....		793.65
From the Alaska fund, Act of January 27, 1905, as amended .....		202,547.75
From Contributed funds, Act of June 30, 1921:		
Territory of Alaska, roads, bridges, trails, etc. ....	\$145,306.54	
Others .....	20,298.32	165,604.86
From appropriations for support of Interior Department:		
Roads and trails, National Parks .....		167,817.27
Total .....		\$1,288,273.46

## I. APPROPRIATIONS.

## 1. Construction and Maintenance of Military and Post Roads, Bridges, and Trails, Alaska.

Act of	Amount	Act of	Amount
June 12, 1906 .....	\$ 150,000.00	July 11, 1919 .....	\$ 100,000.00
June 20, 1905 .....	35,000.00(a)	June 5, 1920 .....	350,000.00
Mar. 2, 1907 .....	250,000.00	June 30, 1921 .....	425,000.00(c)
May 11, 1908 .....	250,000.00	June 30, 1922 .....	465,000.00
Mar. 3, 1909 .....	350,000.00	Mar. 2, 1923 .....	670,000.00(d)
Mar. 23, 1910 .....	100,000.00	June 7, 1924 .....	725,000.00
Mar. 8, 1911 .....	150,000.00	Dec. 8, 1924 .....	55,000.00(e)
Aug. 24, 1912 .....	125,000.00	Feb. 12, 1925 .....	900,000.00
Mar. 2, 1913 .....	155,000.00(b)	April 15, 1926 .....	900,000.00
April 27, 1914 .....	125,000.00	Feb. 23, 1927 .....	1,022,500.00(f)
Mar. 4, 1915 .....	165,000.00	Mar. 23, 1928 .....	925,000.00(g)
Aug. 29, 1916 .....	500,000.00	Feb. 28, 1929 .....	800,000.00
May 2, 1917 .....	500,000.00	May 28, 1930 .....	800,000.00
July 9, 1918 .....	100,000.00	Feb. 23, 1931 .....	800,000.00
		Total .....	\$11,873,100.00

- (a)—For Fairbanks-Council Survey.  
 (b)—Includes \$55,000.00 for Valdez dyke.  
 (c)—Includes \$10,000.00 for Nome-Kiwalik Survey.  
 (d)—Includes \$600.00 for survey Juneau wharf.  
 (e)—Deficiency to cover Increase of Compensation 1925.  
 (f)—Includes \$22,500.00 for Juneau wharf.  
 (g)—Includes \$100,000.00 for Flood Control, Lowell Creek.

## 2. Construction and Maintenance of Wagon Roads, Bridges, and Trails, "Alaska Fund."

Miscal Year	Amount	Fiscal Year	Amount
1905 .....	\$ 28,000.00	1919 .....	\$ 35,000.00
1906 .....	80,500.00	1920 .....	124,992.96
1907 .....	128,584.00	1920 (sup.) .....	153,805.19
1908 .....	117,750.00	1921 .....	98,437.82
1909 .....	145,200.00	1922 .....	135,975.05
1910 .....	125,000.00	1923 .....	119,227.10
1911 .....	155,000.00	1924 .....	115,803.20
1912 .....	162,000.00	1925 .....	123,871.33
1913 .....	228,000.00	1926 .....	137,431.66
1914 .....	166,316.32	1927 .....	142,905.28
1915 .....	171,824.31	1928 .....	73,653.64
1916 .....	164,403.30	1929 .....	150,432.68
1917 .....	50,000.00	1930 .....	216,757.86
1918 .....	256,000.00	1931 .....	54,843.66
		Total .....	\$3,651,714.36

## 3. Increase of Compensation, War Department.

Fiscal Year	Amount	Fiscal Year	Amount
1918 .....	\$ 145.20	1922 .....	\$ 4,322.00
1919 .....		1923 .....	32,846.67
1920 .....		1924 .....	56,805.54
1921 .....	940.00	Total .....	\$ 95,059.50

## 4. National Cemeteries.

Fiscal Year	Amount	Fiscal Year	Amount
1925 .....	\$ 302.17	1929 .....	\$ 1,176.00
1926 .....	300.00	1930 .....	1,467.72
1927 .....	800.00	1931 .....	800.00
1928 .....	792.83	Total .....	\$ 5,638.72

## 5. Roads and Trails, National Parks.

Act of	Amount	Act of	Amount
March 3, 1925 .....	\$ 60,000.00	March 4, 1929 .....	\$ 65,000.00
May 10, 1926 .....	60,000.00	May 14, 1930 .....	220,000.00



January 12, 1927	16,000.00	Feb. 14, 1931	156,876.37
March 4, 1928	60,000.00		
		Total	\$ 647,876.37

I. Total Federal Appropriations ..... \$16,273,388.95

## II. CONTRIBUTED FUNDS.

### Act of Congress approved June 30, 1921, Alaska Special Fund.

#### 1. By the Territory:

Act of Legislature approved April 21, 1919.  
Public Roads, Bridges, Trails and Ferries.

Fiscal Year:		
1920	\$115,517.94	
1921	86,746.61	\$ 201,264.55

Approved May 7, 1931, Public Roads, Bridges, Trails and Ferries:

Fiscal Year:		
1922	\$ 28,000.00	
1923	43,237.28	
1923	88,512.88	159,750.16

Approved May 5, 1921, Nizina River Bridge.

Fiscal Year:		
1922	\$ 5,000.00	
1923	20,000.00	25,000.00

Approved May 7, 1921, Shelter Cabins.

Fiscal Year:		
1922	\$ 6,500.00	
1923	3,500.00	10,000.00

Approved May 4, 1923, Public Roads, Bridges, Trails and Ferries:

Fiscal Year:		
1924	\$ 91,325.35	
1925	76,478.45	167,803.80

Approved May 4, 1923, Shelter Cabins:

Fiscal Year:		
1924	\$ 15,000.00	15,000.00

Approved April 30, 1925, Public Roads, Bridges, Trails and Ferries:

Fiscal Year:		
1926	\$113,850.00	
1927	83,292.24	197,142.24

Approved April 30, 1925, Shelter Cabins:

Fiscal Year:		
1925	\$ 2,500.00	
1926	17,500.00	20,000.00

Approved April 30, 1925, Telephone Lines, Seward Peninsula:

Fiscal Year:		
1926	\$ 2,149.10	
1927	1,382.50	
1928	467.60	3,999.20

Approved April 30, 1925, Pioneers' Cemetery Road:

Fiscal Year:		
1927	\$ 3,341.02	3,341.02

Approved May 2, 1927, Public Roads, Bridges, Trails and Ferries:

Fiscal Year:		
1928	\$163,098.02	
1929	181,513.79	344,611.81

Approved May 2, 1927, Shelter Cabins:

Fiscal Year:		
1928	\$ 25,000.00	
1929	7,266.63	32,266.63

Approved May 2, 1927, Telephone Lines, Seward Peninsula:

Fiscal Year:		
1928	\$ 2,796.97	
1929	1,203.03	4,000.00

Approved May 2, 1929, Yukon-Kuskokwim Portage:

Fiscal Year:		
1930	\$ 7,500.00	7,500.00

Approved May 1, 1929, Telephone Lines:

Fiscal Year:		
1930	\$ 74.00	74.00

Approved May 2, 1929, Public Roads, Bridges, Trails and Ferries:

Fiscal Year:		
1930	\$148,413.03	
1931	139,972.99	288,386.02

Approved April 27, 1929, Telephone Lines, Seward Peninsula:

Fiscal Year:		
1930	\$ 2,493.61	
1931	2,566.39	5,000.00

Approved May 2, 1929, Shelter Cabins:

Fiscal Year:		
1930	\$ 12,000.00	
1931	6,828.99	18,828.99

Total Territory ..... \$1,502,768.42

#### 2. By others:

Fiscal Year 1922	\$ 1,683.77
Fiscal Year 1923	1,379.54
Fiscal Year 1924	4,540.00
Fiscal Year 1925	883.12
Fiscal Year 1926	2,819.01
Fiscal Year 1927	5,766.63
Fiscal Year 1928	19,489.15
Fiscal Year 1929	23,430.32
Fiscal Year 1930	17,969.23
Fiscal Year 1931:	

National Park Service	\$ 670.95
Alaska Game Commission	1,155.68
U. S. Forest Service	1,445.71
U. S. Bureau of Fisheries	1,920.63
Hastings Creek Dredging Co.	270.00
U. S. Lighthouse Service	289.35
S. L. B. Development Co.	500.00
Dry Creek Dredging Co.	37.50
Hannum Gold Fields Consolidated	3,186.70
Alaskan Airways	237.00
Northern Air Transport	84.00
A. Y. Cordovado	150.00
City of Nome	647.50
City of Seward	809.97
City of Anchorage	507.00
Willow Creek Mines	6,250.00
Fairbanks Telephone Co.	237.13
Citizens of Brooks	285.22
	\$ 18,764.32

Total Others ..... \$ 96,715.09

#### 3. Funds Contributed for Flood Control Lowell Creek:

Territory of Alaska	\$ 10,000.00
City of Seward	15,000.00
	25,000.00

II. Total, Contributed Funds ..... \$1,626,483.51

### III. OTHER FUNDS SUPERVISED BY THE COMMISSION AND THE JUNEAU, ALASKA RIVER AND HARBOR DISTRICT.

Fiscal Year 1920 and prior years .....\$1,221,574.09

Fiscal Year 1921:

1. For the Territory of Alaska:

Kuskulana Bridge .....\$ 750.00

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 1,602.50

Total ..... \$ 2,352.50

Fiscal Year 1922:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 7,812.19  
Chairman, 4th Division ..... 21,305.00

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 47,503.46

3. For the Quartermaster General, U. S. Army:

Chilkoot Barracks water supply ..... 2,502.02

Total ..... \$ 79,122.67

Fiscal Year 1923:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 10,855.72  
Chairman, 4th Division ..... 15,717.11  
Seward Peninsula Railroad ..... 24,014.00

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 21,145.12

Total ..... \$ 71,731.95

Fiscal Year 1924:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 14,993.86  
Chairman, 4th Division ..... 20,000.50  
Tolovana Tram Road ..... 6,425.00

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 37,931.56

3. For the National Park Service:

Mt. McKinley National Park Road ..... 700.25

Total ..... \$ 80,051.17

Fiscal Year 1925:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 11,806.14  
Chairman, 4th Division ..... 9,000.00  
Kaitag Portage Survey ..... 312.72

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 54,417.89

3. For the Quartermaster General, U. S. Army:

Chilkoot Barracks Water Supply ..... 2,500.00

Total ..... \$ 78,036.75

Fiscal Year 1926:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 9,882.86  
Chairman, 4th Division ..... 12,360.00

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 47,521.95

3. For the Quartermaster General, U. S. Army:

Chilkoot Barracks Water Supply ..... 5,000.00

4. Miscellaneous:

..... 8,276.25

Total ..... \$ 83,041.00

Fiscal Year 1927:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 13,052.15  
Chairman, 4th Division ..... 13,844.42

2. For the Chief of Engineers, U. S. Army:

Rivers, Harbors, Fish Traps, etc. .... 129,160.18

3. For the Quartermaster General, U. S. Army:

Chilkoot Barracks Water Supply ..... 1,078.89

4. Miscellaneous:

..... 3,218.00

Total ..... \$ 100,302.64

Fiscal Year 1928:

1. For the Territory of Alaska:

Chairman, 3rd Division .....\$ 13,975.34  
Chairman, 4th Division ..... 17,570.41

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 375,890.13

3. Miscellaneous:

..... 3,795.00

Total ..... \$ 411,230.88

Fiscal Year 1929:

1. For the Territory of Alaska:

Chairman, 4th Division .....\$ 1,952.90

2. For the Chief of Engineers, U. S. Army:

Rivers and Harbors, Fish Traps, etc. .... 93,054.51

3. Miscellaneous:

..... 3,850.00

Total ..... \$ 98,857.41

36 ANNUAL REPORT ALASKA ROAD COMMISSION.

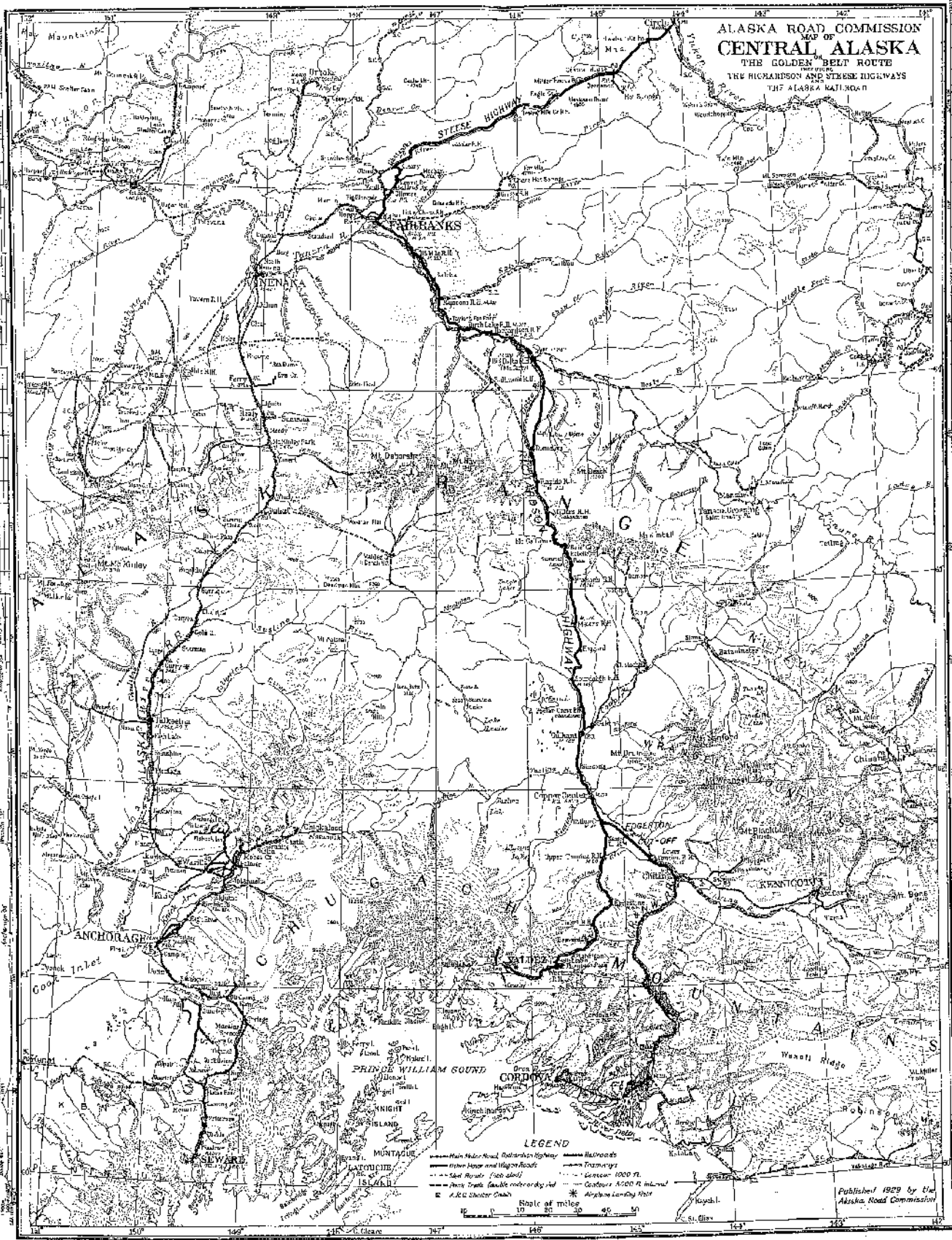
Fiscal Year 1930:

1. For the Territory of Alaska: .....	\$ 1,000.00
2. For the Chief of Engineers, U. S. Army:	
Rivers and Harbors, Fish Traps, etc. ....	92,866.29
3. Miscellaneous: .....	2,500.00
Total .....	\$ 96,366.29

Fiscal Year 1931:

1. For the Chief of Engineers, U. S. Army:	
Improvement Nome Harbor .....	\$ 25,388.85
Improvement Wrangell Narrows .....	747.77
Improvement Ketchikan Harbor .....	20,198.16
Improvement Port Alexander .....	640.42
Improvement Harbor of Refuge, Seward.....	39,852.86
Examinations, Surveys and Contingencies....	9,170.43
Survey, Salmon River .....	225.17
Total .....	\$ 96,229.65
III. Total Supervised Funds .....	\$2,479,048.06
Grand Total, all funds .....	\$20,377,920.53

ALASKA ROAD COMMISSION  
 MAP OF  
**CENTRAL ALASKA**  
 THE GOLDEN BELT ROUTE  
 THE HICHAUMSON AND STRESE HIGHWAYS  
 THE ALASKA NATIONAL





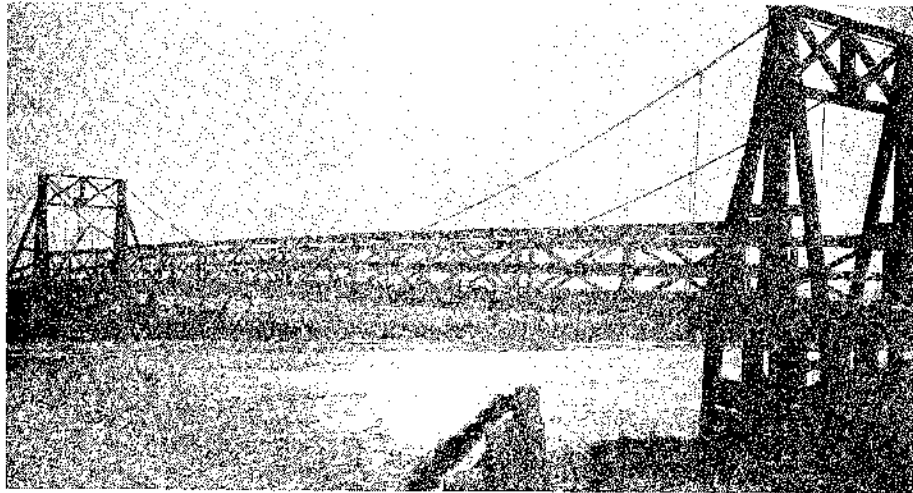
THAWING OF SUBGRADE AFTER STRIPPING---SOUTHWESTERN DISTRICT



COMPLETED GRAVEL ROAD---SOUTHWESTERN DISTRICT



OPENING ROAD FOR SPRING TRAFFIC---SNOWSLIDE GULCH---  
RICHARDSON HIGHWAY



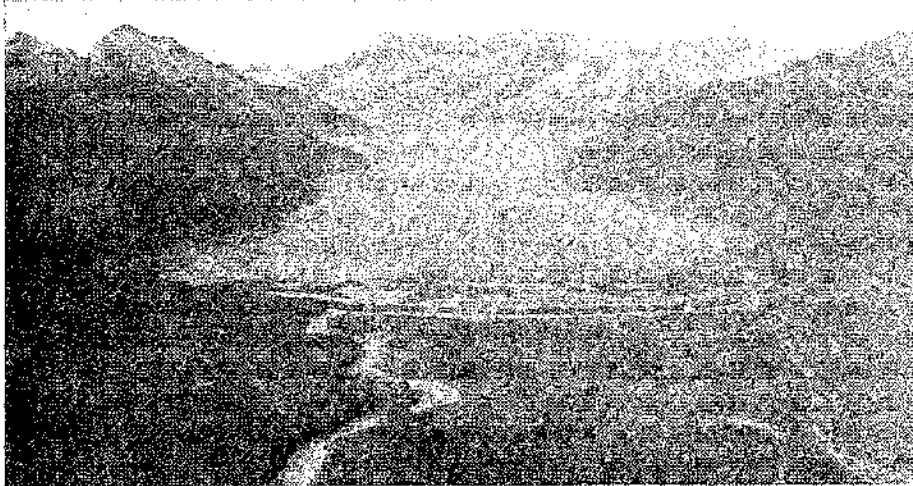
NOME RIVER SUSPENSION BRIDGE---NOME DISTRICT



MUSKEG AND NIGGERHEADS COMPLICATE ROAD LOCATION



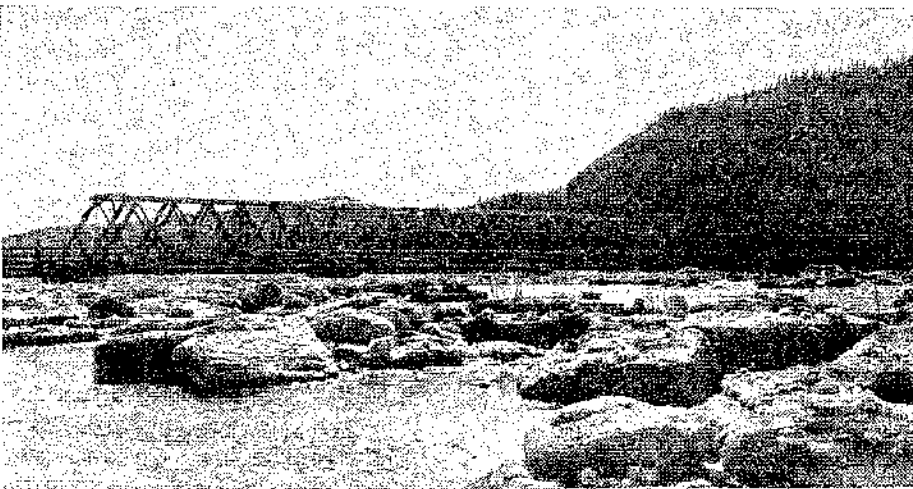
ROAD ACROSS TUNDRA---SPRING THAW---NOME DISTRICT



INNUMERABLE GLACIERS ARE SOURCES OF FLASHY SILT-LADEN STREAMS WHICH PRESENT UNUSUAL BRIDGING PROBLEMS



A WANDERING GLACIAL STREAM CONFINED TO HALF ITS NATURAL BED IN ORDER TO REDUCE BRIDGE REQUIREMENTS



THE SPRING BREAK-UP IS A CONTINUAL SOURCE OF DANGER TO BRIDGES



INSPECTING, MEASURING, AND STAKING WINTER TRAILS---  
NOME DISTRICT



WINTER TRAIL---NOTE FENCE CONSTRUCTED TO PREVENT TRAVELER  
FALLING OFF TRAIL IN STORM

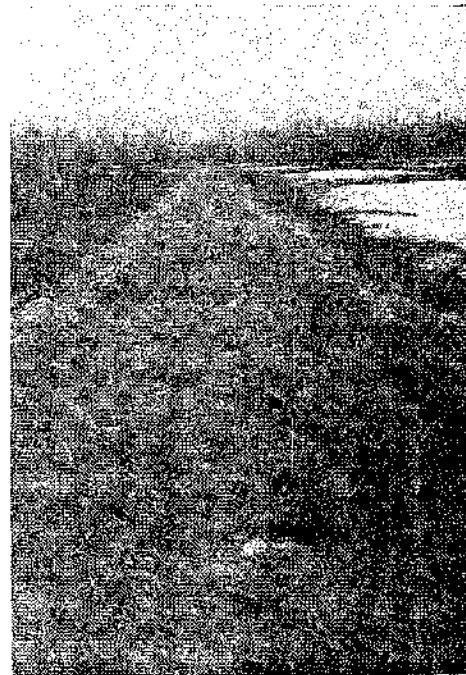


A SHELTER CABIN SERVES ITS PURPOSE

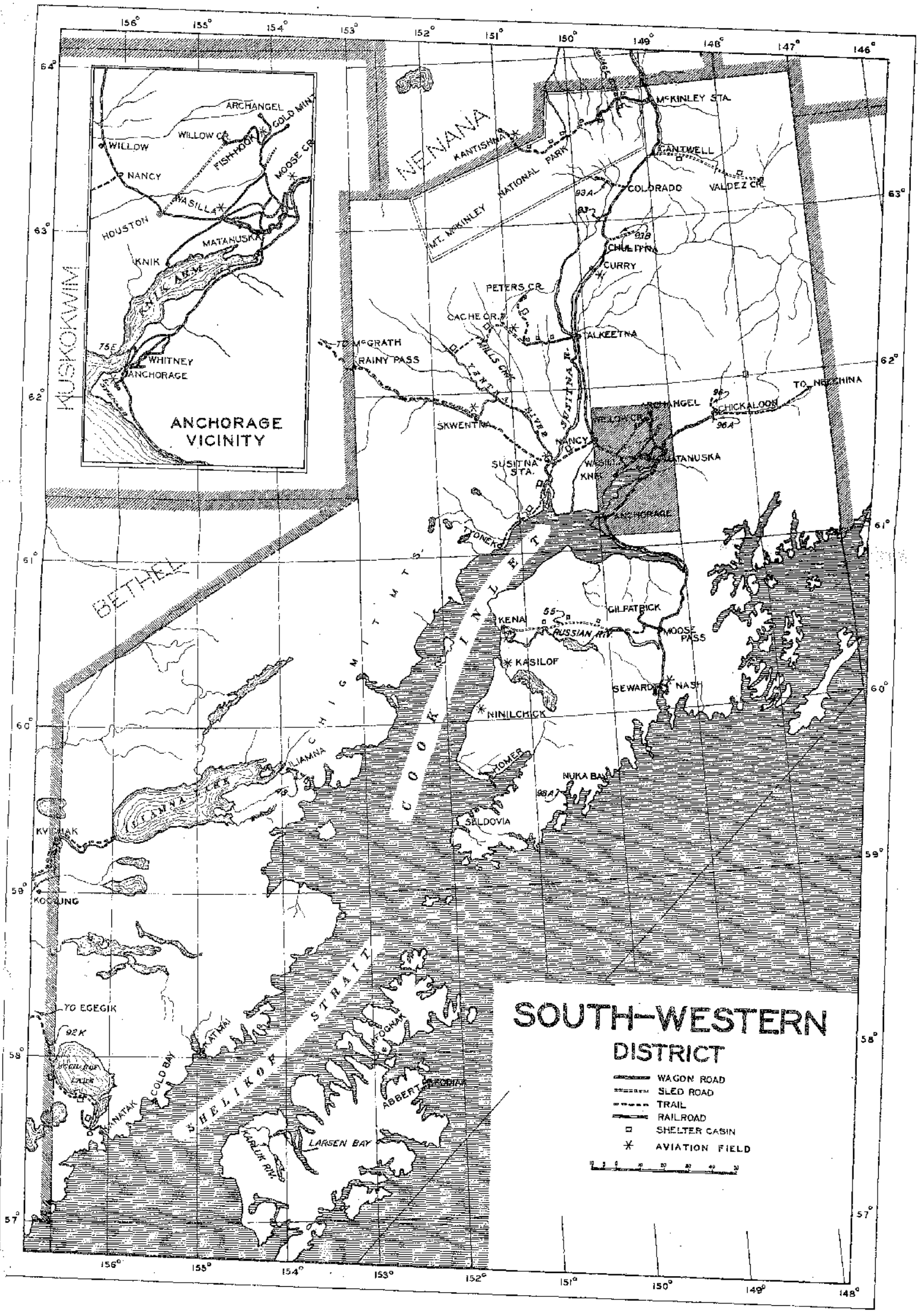


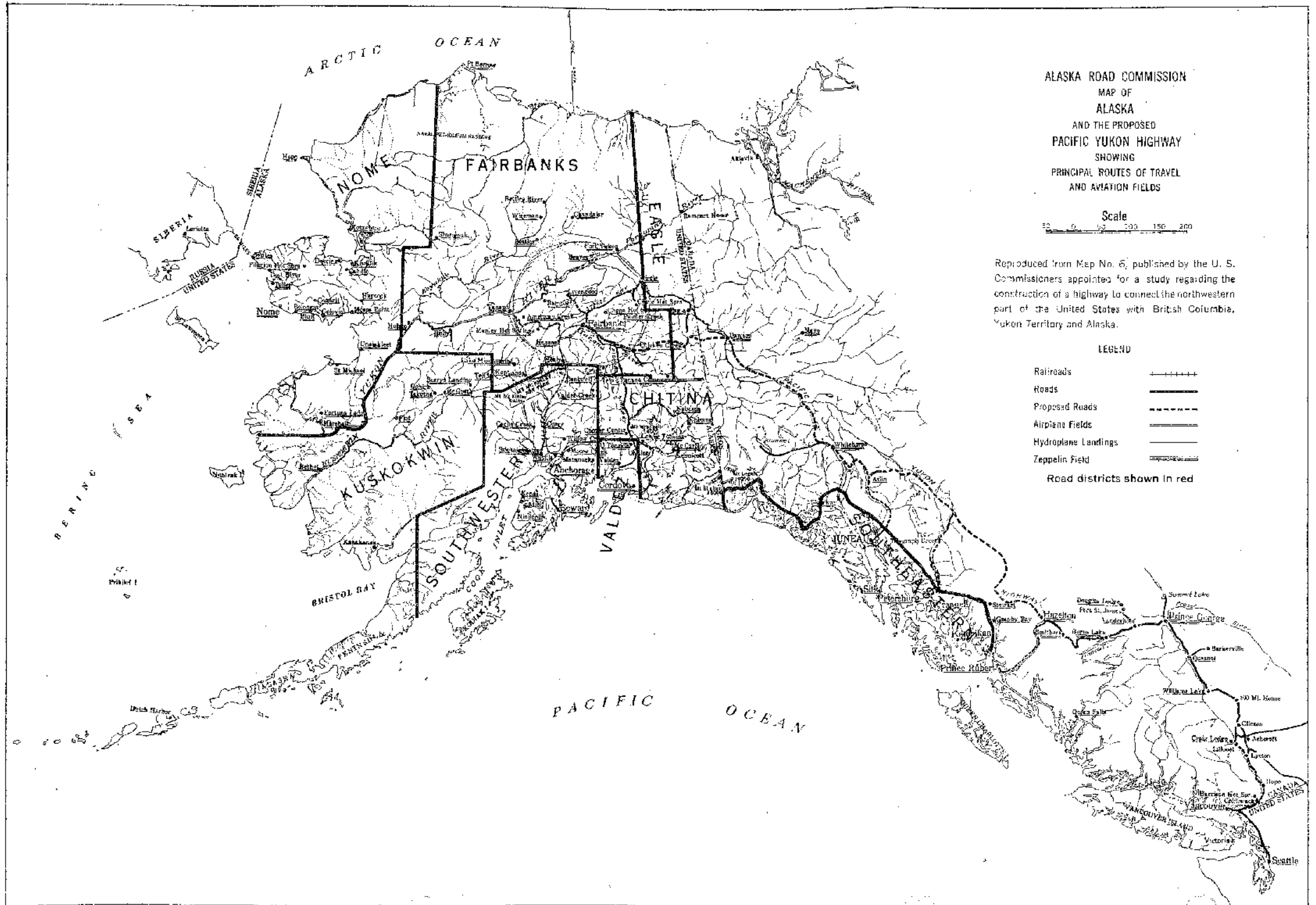


LEFT--  
LOG-CRIBBED BRIDGE AND BRUSH  
SNOW FENCE ON STEESE HIGHWAY  
BETWEEN FAIRBANKS AND CIRCLE



RIGHT--  
FIRST STAGE OF ROAD CONSTRUCTION  
OVER SOFT GROUND IN MATA-  
NUSKA VALLEY. GRAVEL SURFACING  
SUPPORTED BY BRUSH





ALASKA ROAD COMMISSION  
 MAP OF  
 ALASKA  
 AND THE PROPOSED  
 PACIFIC YUKON HIGHWAY  
 SHOWING  
 PRINCIPAL ROUTES OF TRAVEL  
 AND AVIATION FIELDS

Scale  
 0 50 100 150 200

Reproduced from Map No. 6, published by the U. S. Commissioners appointed for a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory and Alaska.

LEGEND

- Railroads
- Roads
- Proposed Roads
- Airplane Fields
- Hydroplane Landings
- Zeppelin Field
- Road districts shown in red