

DISTRIBUTION OF EXPENDITURES.

clerks) -----	\$14,063.16
-----	157,603.53
-----	1,685.87
-----	20,628.78
(logs) -----	9,961.71
and beds) -----	10,496.51
) -----	30,988.47
horseshoeing, veterinary supplies) -----	25,587.11
stage -----	578.51
light -----	1,275.51
-----	10,013.18
page, wagons, harness, etc.) -----	3,843.84
lies, maps, printing, cleaning and toilet -----	364.79
es, barns, or equipment) -----	1,954.83
operation, maintenance -----	9,213.11
-----	765.35
-----	299,024.26

APPROPRIATIONS.

Act.	Construction and maintenance military and post roads, bridges, and trails, Alaska.
-----	\$150,000.00
-----	250,000.00
-----	250,000.00
-----	250,000.00
-----	350,000.00
-----	100,000.00
-----	150,000.00
-----	125,000.00
-----	155,000.00
-----	125,000.00
-----	165,000.00
-----	500,000.00
-----	500,000.00
-----	100,000.00
-----	2,920,000.00

Treasury, United States, account "Alaska fund."

1905, as amended by an act approved May 14, 1906.	Wagon road, bridges, and trails, Alaska fund.
-----	\$29,000.00
-----	80,500.00
-----	128,784.00
-----	117,750.00
-----	145,000.00
-----	125,000.00
-----	155,000.00
-----	152,000.00
-----	228,000.00
-----	166,316.25
-----	171,821.75
-----	164,302.00
-----	50,000.00
-----	256,000.00
-----	35,000.00
-----	2,003,376.00

EXTRACT

REPORT UPON THE CONSTRUCTION AND MAINTENANCE OF MILITARY AND POST ROADS, BRIDGES, AND TRAILS, ALASKA

BOARD OF ROAD COMMISSIONERS FOR ALASKA



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1920

automobile on 160 miles of the Richardson and Fairbanks during the entire winter. It has not been encouraged by the board, but is being rapidly. Approximately 90 per cent of wagon roads is handled by motor, which has cost of road maintenance.

ALASKA'S TRANSPORTATION SYSTEM.

One year marks the end of the war period in the road system has been kept open during the some slight improvements made. In authorizing this board, it is desired to review the met in Alaska and the plan of this board for

conomically from three main causes by reason of increased prices and wages made the mining of y, unprofitable except from the richest claims; the United States attracted many prospectors Alaska; third, and most important, a greater per the young men of Alaska, variously estimated men, entered the service of the United States any remained in the United States. Taken together created a shortage of the vigorous, virile miner whom finally the prosperity of Alaska rests. That the tide is turning and that a few years Alaska not only of these men but also of many in the development of Alaska offers a promising

important industries are mining, fisheries, and fur, paper, oil, and coal production. All may reserves of pulpwood exist and with the rise er in the United States developments are possible new leasing law is being sought both on the ad in the Controller Bay district. The oil is of quality but no large producing wells have been to coal, while both the Matanuska and Bering gh quality, until such time as a shortage of na- Pacific Coast States no export market for this The presence of this local coal does, however, Alaska consumers of coal. Important advances agriculture and again the production of limited truck, root crops, and grains, for local consumption of agricultural effort.

Present and future industries of Alaska do offer likelihood for a substantial population. It must nearly one billion dollars in wealth has been ex- ntry and little more than one-tenth of this value form of Federal or private improvement. To ure, to enable the ready exchange of goods be- he United States, to provide channels through exchanged within Alaska, reduces in the end to uate transportation facilities.

First in importance in Alaska's transportation facilities are the splendid existing coastal and interior waterways. Essentially an overseas country from the United States, the open water of the Gulf of Alaska and southeastern Alaska are virtually Alaska's richest possession. After these come the easily navigable, although open but five months of the year, rivers of the Yukon, Tanana, Kuskokwim, and Koyukuk. The water-borne commerce upon these rivers and ocean waters are and always will be the chief life-giving element in Alaska's commerce.

After the water-borne commerce in importance comes the land transportation connecting up base ports and waterways. Two means exist, of course, railroads and wagon roads. As to railroads, with the completion of the Government railroad from Seward to Fairbanks about \$100,000,000 will have been invested from public and private funds in railroads. For both railroads and wagon roads the function must be, in the present state of Alaska's development, to cross divides and connect up lines of water communication. For railroad development the expenditure already committed is such as to take care of the development of Alaska for a long time. As to wagon roads, the nature of the commerce existing and expected in Alaska is such as to make them especially necessary. The Government railroad, now nearing completion, will be of little value until the commerce of the country passed through is brought to the railroad upon tributary highways. But in providing such roads the immediate construction of numerous feeder roads constructed to fit only the topographical features of the Territory, even if the fabulous cost could be met, would give but meager return. These feeder roads must be built with a careful consideration of both the topography of the country passed through and the economic return to be expected. Finally, before the tonnage which the Government railroad can carry materializes it will be found that an equal amount to that spent upon its construction has been spent on tributary wagon roads. To enable a substantial development of this generous Federal project to take place, to aid in the balanced development of all parts of Alaska, a modest and thoroughly considered program of wagon-road construction is now presented.

PROGRAM PROPOSED.

During the 16 years of this board's existence slightly over 1,000 miles of road (besides much greater lengths of sled roads and trails) have been constructed and maintained, with a cost of slightly over \$5,000,000. Two policies of this board through all this period have shown the highest wisdom: First, that of building successively trail, sled road, and wagon road as the traffic along a communication line justified; second, building largely with local labor. These two policies assured building along sound lines, resulting in roads carrying traffic as soon as completed. To import labor to construct roads would make possible the building of roads away from centers of present or even prospective population and serving, when completed, only as a monument to the builder. The soundness of the board's policy is further emphasized by a survey of roads now in use. Under no possible conception can any part of the present road and trail system be abandoned.

The following sets forth a 10-year program of road construction that will carry forward substantially the reviving industries of this Territory and will provide the Government railroad with a generous contribution of traffic.

To prepare any program of road construction, both the topography of the region traversed and the economic return expected must be studied. In topography alone the glaciers, glacial streams, swamps, elevated snow-covered mountain ridges, frozen soil, and dense vegetation offer obstacles of remarkable obstinacy. As to economic returns, the traffic existing and prospective must be estimated. The building of roads through known mineralized but undeveloped areas to reach developed areas is sought.

To be considered at the same time is the location of projected roads in relation to other lines of traffic—that is, waterways and railroads. In the present state of Alaska's development it is unwarranted to parallel such lines of traffic with wagon roads. It is especially aimed to build as feeders and in a few cases cross divides and link together existing lines of traffic. Roads planned upon such a conception will give the greatest return with the minimum of cost.

Almost of equal importance with the above considerations come the fitting of the program with the funds that are requested. This modest program can be constructed within the estimated cost and time. It would require only a draftsman's service to cover the map of Alaska with a network of roads that could not be constructed with any reasonable appropriation within less than 50 years. This estimate is therefore made with a view to being a realizable program with the funds and time reasonably available. This program of road development covers that desired during the next 10 years, 1921 to 1930, inclusive. The new road mileage which is projected totals 700 miles. These roads are termed 1921 roads. This will call for a rate of construction of 70 miles per year. The cost of these roads to construct and maintain through this period will average \$10,000 per mile. This cost is an average for all districts. The roads selected for construction during this period are along well-defined lines of travel which have received previous development as trails and sled roads and whose worth is unquestioned.

In the work proposed for the next 10 years, three classes of road-building operations will be carried on. First, the new construction planned as arterial or feeder highways and totaling 700 miles for the period will be carried out. These roads will, in the main, follow old lines of development. These are described in detail below. Second, roads, termed development roads, the value or location of which is not yet fixed, will be constructed from time to time with a limited apportionment of funds. A number of roads of this type are described hereafter. Construction of roads of this type provide the necessary flexibility to meet new conditions. At a later time these development roads may develop into arterial roads. Third, the present road and trail system must be kept up. This requires an expenditure for maintenance which is estimated, from past expenditures of the board, to be \$200,000 per year. Detailed estimates of such maintenance is given below.

In presenting the program in detail, it is necessary to outline briefly the physical features of Alaska and the lines of communica-

tion already established. The portion of Alaska development naturally divides into the following:

1. Southeastern Alaska, embracing the island land east of the one hundred forty-first meridian is served almost entirely by water-borne communication. Construction is planned under this program. The primary roads to settlements not already constructed are development roads.

2. Copper River Valley, embracing Cordova, Kodiak and served by the Copper River Railroad summit on the Fairbanks Road.

3. Susitna Valley, embracing the country traversed by the Fairbanks and Matanuska Railroad in the Susitna Valley, including Matanuska. The Alaskan Peninsula and closely attached in development to this district therein.

4. The Kuskokwim, embracing the lower Yukon valley of the Kuskokwim west of the Alaska Peninsula. This is very meagerly provided with transportation. The most important project of this program aims at the construction of a road.

5. Yukon district, including Fairbanks and the Tanana Valleys. This region is of high importance for its position as a must originate the most important tonnage for the Territory.

6. Nome district, 1921 roads:

Project symbol.	Name of road.	District.	New construction.	
A	Talkeetna, Takotna, Ophir, Ruby.	Susitna and Kuskokwim.	Miles 280	This road reaches through the north of the Kuskokwim Park, to Tall road. Sixty miles construction. region of the north.
B	Davidsons Landing, Kugarok, Candle.	Nome.....	135	This road runs Kugarok mine Candle. It is further development.
C	Roosevelt, Glacier, Riley Creek.	Yukon.....	75	This road connects mining district the Kantishna Railroad at R.
D	Eagle 40-Mile Boundary.	.....do.....	50	This road is an improvement district made at the A with the Miller.
E	Chatanika, House.	Miller.....do.....	80	This road connects projects, enables the Yukon to be as a very important.
F	Rampart, Hot Springs.	.....do.....	21	This road connects Rampart on the Tanana.
G	Gulkana, Chena.	Chistochina. Copper River.	40	This road is an banks Trail, road from the Yukon at Fairbanks promising.

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the program in detail, it is necessary to outline ical features of Alaska and the lines of communica-

tion already established. The portion of Alaska now under de- velopment naturally divides into the following districts:

1. Southeastern Alaska, embracing the islands and coastal main- land east of the one hundred forty-first meridian. This district is served almost entirely by water-borne commerce and no new con- struction is planned under this program. The necessary short tribu- tary roads to settlements not already constructed can be built as development roads.
2. Copper River Valley, embracing Cordova, Valdez, and Kenne- cott and served by the Copper River Railroad, extending to the summit on the Fairbanks Road.
3. Susitna Valley, embracing the country traversed by the Govern- ment Railroad in the Susitna Valley, including Seward, Anchorage, and Matanuska. The Alaskan Peninsula and Kodiak Islands are closely attached in development to this district and are included therein.
4. The Kuskokwim, embracing the lower Yukon Valley and the valley of the Kuskokwim west of the Alaska Range. This district is very meagerly provided with transportation facilities and the most important project of this program aims at its relief.
5. Yukon district, including Fairbanks and the Yukon and Tanana Valleys. This region is of high importance for development as here must originate the most important tonnage for the Government Rail- road.
6. Nome district, 1921 roads:

Project symbol.	Name of road.	District.	New construction.	Remarks.
A	Talkeetna, Takotna, Ophir, Ruby.	Susitna and Kuskokwim.	Miles. 280	This road reaches from Ruby, on the Yukon, through the most promising mining district of the Kuskokwim, through Mount McKinley Park, to Talkeetna on the Government Railroad. Sixty miles of this route are already under construction. The most promising mineralized region of the Upper Yentna Valley is reached.
B	Davidsons Landing, Kugarok, Candle.	Nome.....	135	This road runs from tidewater through the Kugarok mining district to Kotzebue Sound at Candle. It is of the highest importance for the further development of the Seward Peninsula.
C	Roosevelt, Glacier, Riley Creek.	Yukon.....	75	This road connects the important Kantishna mining district with the head of navigation on the Kantishna River and with the Government Railroad at Riley's Creek.
D	Eagle 40-Mile Boundary.	do.....	50	This road is an extension of an existing road and improvement of a sled road to the 40-mile mining district from Eagle. Connection will be made at the Alaska-Yukon Territory boundary with the Miller Creek Road to Dawson.
E	Chatanika, Miller House.	do.....	80	This road connects two old road commission projects, enabling traffic to pass from Circle on the Yukon to the Fairbanks district and serving as a very important feeder to the Government Railroad.
F	Rampart, Hot Springs.	do.....	21	This road connects two old projects, connecting Rampart on the Yukon with Hot Springs on the Tanana.
G	Gulkana, Chistochena.	Copper River.	40	This road is an important tributary to the Fairbanks Trail, is a part of a future main artery road from the Copper River Valley to the Yukon at Eagle, and makes accessible the promising Slate Creek mining district.

DEVELOPMENT ROADS.

Under development roads the most important possible projects noted below:

Alaskan Peninsula.—Wide Bay-Oil Fields, 25 miles. Road from tidewater at Wide Bay to the oil fields now being prospected near Cold Bay.

Iliamna Lake-Lake Clark, 20 miles. Serves as a portage from Iliamna Lake to Lake Clark.

Kenai Peninsula.—Kenai-Homer, 70 miles. This road, with completion of the Kenai Mile 29, will give a system of roads to Kenai Peninsula reaching every district and making connection with the Government Railroad at Mile 29.

Susitna Valley.—Talkeetna-Iron Creek, 45 miles. This road will connect an important mining district in the Susitna Valley with the Government Railroad.

Copper River Valley.—Abercrombie (Copper River R. R.)-Katalla, 45 miles. Makes accessible the Katalla oil field to the port of Cordova, and especially necessary in case a railroad extension is made.

Katalla-Cape Yakataga, 80 miles. Reaches a new oil field now being prospected and otherwise inaccessible for development.

Yukon Valley.—Forty Mile to Tanana Crossing, 60 miles. Extension of the Eagle-Forty Mile Road passing through an important mining district and reaching the valley of the Tanana.

Susitna Valley.—Government Railroad-Valdez Creek, 50 miles. This road makes accessible to the railroad the important Valdez Creek mining district. This district is now reached only by a 70-mile trail from Meiers on the Richardson Road.

Copper River Valley.—Nizina River to Nizina, 10 miles. This will include the Nizina River Bridge and make accessible the upper Chitina Valley to the Copper River Railroad.

Strelina to Kuskulana River, 16 miles. This comprehends the improvement of existing roads built by mining operators and makes accessible an important mining district in the upper Kuskulana Valley.

Chistochina-Chisana, 45 miles. This makes accessible the upper Chistochina Valley workings to the road projected on this year's program from Gulkana to Chistochina.

Yukon Valley.—McCarty to Forty Mile, 135 miles. This road would complete a through road from Dawson and Eagle to Fairbanks, and would pass through a very promising and undeveloped agricultural region in the upper Tanana Valley.

Circle to Fort Yukon, 80 miles. Makes accessible both winter and summer the important trading post of Fort Yukon. This settlement of 50 whites and 500 natives is now reached by water in summer and with difficulty over the ice on the Yukon in winter.

Chatanika-Livengood, 56 miles. This road makes accessible the important mineral developments around Livengood.

Beaver-Caro, 75 miles. Provides a line of traffic between the Chandalar mining district and the Yukon.

Fort Gibbon-Arctic City, 100 miles. Connects the valley of the Koyukuk with the Yukon Valley.

BOARD OF ROAD COMMISSIONERS FOR ALASKA

Eagle-Seventy Mile, 40 miles. Connects the Seventy Mile district with Eagle.

Nome district.—Nome-Kugarok, 60 miles. Connects Nome district with the Kugarok mining district and with the Dade-Kugarok-Candle Road projected under this year's program.

Southeastern Alaska.—Skagway-White Pass, 13.5 miles. An important international road and by cooperative action of the Canadian Government would make travel from Skagway to White Horse possible.

Taku Landing-Boundary, 22 miles. This road, in cooperation with the Canadian Government into the Lake Atlin region would make travel from Juneau to Lake Atlin.

Estimate for fiscal year ending June 30, 1922.

Objects of expenditure.	Estimated amount.
For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, to be immediately available.....	\$.....

REMARKS CONCERNING ESTIMATES.

It is proposed to enter into the program of road construction presented for the next 10 years and at the same time to put in an excellent state of repair the existing system. With the following estimate will complete the opening up of the Fairbanks Road and the Haines-Pleasant Camp Road. Continue work on the Tacotna-Ophir, Talkeetna-Cache Creek Roads and initiate work on the Kugarak-Candle, Circle Chatnika and Kulkana-Slate Creek Roads.

It is proposed to distribute the funds requested for 1922 as follows:

Estimate of funds—1922 construction.

Southeastern Alaska:	
Skagway-White Pass	-----
Haines-Chilkat	-----
Juneau local roads	-----
Southwestern Alaska:	
Seward-Kenai Lake Road	-----
Mile 28-Sunrise Road	-----
Talkeetna-Cache Creek Road	-----
Harendeen Bay-Portage	-----
Wasilla-Willow Creek	-----
Palmer-Mile 26	-----
Valdez-Chitina-Fairbanks Road	-----
Copper River Valley:	
McCarty-Nizina River	-----
Gulkana-Chistochina	-----

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Eagle—Seventy Mile, 40 miles. Connects the Seventy Mile mining district with Eagle.

Nome district.—Nome—Kugarok, 60 miles. Connects the Nome district with the Kugarok mining district and with the Davidson's Land- ing—Candle Road projected under this year's program.

Southeastern Alaska.—Skagway—White Pass, 13.5 miles. This is an important international road and by cooperative effort on the part of the Canadian Government would make travel by road from Skagway to White Horse possible.

Taku Landing—Boundary, 22 miles. This road, if prolonged by the Canadian Government into the Lake Atlin region, would permit travel from Juneau to Lake Atlin.

Estimate for fiscal year ending June 30, 1922.

Objects of expenditure.	Estimated, 1922.	Appropriated, 1921.
For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, to be immediately available.....	\$955,000	\$350,000

REMARKS CONCERNING ESTIMATES.

It is proposed to enter into the program of road construction as presented for the next 10 years and at the same time to put into an excellent state of repair the existing system. With this in view, the following estimate will complete the opening up of the Valdez-Fairbanks Road and the Haines-Pleasant Camp Road and will continue work on the Tacotna-Ophir, Talkeetna-Cache Creek, Kantishna roads and initiate work on the Kugarak-Candle, Eagle-40 Mile, Circle Chatnika and Kulkana-Slate Creek Roads.

It is proposed to distribute the funds requested for the fiscal year 1922 as follows:

Estimate of funds—1922 construction.

<b>Southeastern Alaska:</b>		
Skagway-White Pass.....	\$10,000	
Haines-Chilkat .....	40,000	
Juneau local roads.....	5,000	
		\$55,000
<b>Southwestern Alaska:</b>		
Seward-Kenai Lake Road.....	5,000	
Mile 28-Sunrise Road.....	3,000	
Kalkeetna-Cache Creek Road.....	100,000	
Haredeen Bay-Portage.....	10,000	
Wasilla-Willow Creek .....	20,000	
Palmer-Mile 26.....	20,000	
		158,000
Valdez-Chitina-Fairbanks Road.....		250,000
<b>Copper River Valley:</b>		
McCarthy-Nizina River.....	15,000	
Gulkana-Chistochena.....	30,000	
		45,000

Yukon District:	
Fairbanks-Fort Gibbon Sled Road.....	\$5,000
Circle-Chatanika.....	80,000
Fort Gibbon-Kaitag Trail.....	3,000
Fort Gibbon-Koyukuk Trail.....	2,000
Salchakit-Caribou Creek Road.....	1,000
Ruby-Poorman.....	40,000
Coldfoot-Wiseman Sled Road.....	3,000
Ophir-Tacotna Road.....	30,000
Fairbanks local roads.....	8,000
Rampart-Hot Springs.....	30,000
Eagle-O'Brien Creek Road.....	30,000
Lignite-Kantishna Road.....	75,000
Beaver-Caro.....	5,000
Fort Yukon-Circle.....	15,000
	\$327,000
Nome District:	
Maintenance of existing roads.....	20,000
Davidson's Landing-Kugarok, new construction.....	80,000
	100,000
Surveys and reconnaissances—Talkeetna to Kuskowim.....	10,000
Government Railroad to Valdez Creek.....	5,000
Wide Bay to Becharof Lake.....	5,000
	20,000
Total.....	955,000

COMMERCIAL STATISTICS.

The external trade of Alaska shows a slight decrease in the fiscal year of 1919.

The following table shows the total commerce.

TOTAL COMMERCE OF ALASKA FOR THE FISCAL YEAR ENDED JUNE 30, 1919.

Shipments of—	
Domestic merchandise from the United States to Alaska.....	\$35,544,084
Domestic merchandise from Alaska to the United States.....	71,594,966
Foreign merchandise from Alaska to the United States.....	473,193
Domestic gold and silver from the United States to Alaska.....	98,523
Domestic gold and silver from Alaska to the United States.....	9,224,739
Foreign gold and silver from Alaska to the United States.....	83,969
Total.....	117,018,835
Shipments of—	
Merchandise from foreign ports to Alaska.....	1,334,405
Merchandise from Alaska to foreign ports.....	1,074,367
Total.....	2,408,772
Grand total.....	119,427,607

This is largely accounted for by the effect of war conditions. The number of men entering the armed forces from this Territory almost eliminated the possibility of new commercial development. The rise in general prices also has handicapped greatly the gold-mining industry. However, every evidence of rapid recovery in all commercial lines exists and this country, of great potential possibilities, faces the future with confidence.

Work upon the Government railroad from Seward to Fairbanks is gradually opening up a new area of interior Alaska. Numerous requests have been made from this area for road construction contiguous to the railroad. Careful consideration will be given to these

requests and work will be done wherever funds are available for project warrants.

Financial summary.

Amount expended on all projects to June 30, 1920, including receipts from sales, etc.:

New work.....	
Maintenance.....	

Total expended.....

Appropriations to June 30, 1920:

Construction and maintenance of military and bridges, and trails, Alaska.....

Wagon roads, bridges, and trails, Alaska fund.....

Funds contributed by Territory of Alaska for roads and ferries, Alaska special fund.....

Total.....

Fiscal year ending June 30.	1916	1917	
Expended for improvement and new work.....	\$139,217.62	\$374,738.90	\$3
Expended for maintenance.....	161,503.00	202,009.00	2
Total expended.....	300,720.62	576,747.90	5
Appropriated by Army act.....	165,000.00	500,000.00	5
Allotted from Alaska fund.....	164,402.30	50,000.00	2
Contributed by Territory of Alaska.....			
Total.....	329,402.31	550,000.00	7

July 1, 1919, balance unexpended.....

Amount appropriated by Army act approved July 11, 1919.....

Amount allotted from Alaska fund.....

Amount contributed by Territory of Alaska.....

Receipts from sales, etc., during fiscal year 1920.....

June 30, 1920, amount expended during fiscal year including receipts from sales, etc.:

New work.....	
Maintenance.....	

July 1, 1920, balance unexpended.....

July 1, 1920, outstanding liabilities.....

Amount appropriated by Army act approved June 5, 1920.....

Amount available from Alaska fund on June 30, 1920.....

Amount available from funds contributed by the Territory of Alaska on June 30, 1920.....

Amount available for fiscal year ending June 30, 1921.....

Amount that can be profitably expended in fiscal year ending June 30, 1922.....

\* \* \* \* \*

CHIEF OF ENGINEERS, U. S. ARMY, 1920.

on Sled Road	\$5,000	
	80,000	
	3,000	
Trail	2,000	
k Trail	1,000	
reek Road	40,000	
	3,000	
led Road	30,000	
	8,000	
ls	30,000	
s	30,000	
oad	75,000	
oad	5,000	
	15,000	
		\$327,000
sting roads	20,000	
-Kugarok, new construction	80,000	100,000
oissances—Talkeetna to Kuskowim	10,000	
d to Valdez Creek	5,000	
rof Lake	5,000	
		20,000
		955,000

COMMERCIAL STATISTICS.

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ALASKA FOR THE FISCAL YEAR ENDED JUNE 30, 1919.

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ilver from the United States to Alaska	98,523
ilver from Alaska to the United States	9,224,759
lver from Alaska to the United States	83,360
	117,018,835
foreign ports to Alaska	1,334,403
Alaska to foreign ports	1,074,367
	2,408,770
	119,427,605

counted for by the effect of war conditions. The  
ring the armed forces from this Territory almost  
bility of new commercial development. The rise  
lso has handicapped greatly the gold-mining in-  
very evidence of rapid recovery in all commercial  
country, of great potential possibilities, faces the  
ace.

overnment railroad from Seward to Fairbanks  
g up a new area of interior Alaska. Numerous  
nade from this area for road construction contigu-  
l. Careful consideration will be given to these

requests and work will be done wherever funds are available and the  
project warrants.

Financial summary.

Amount expended on all projects to June 30, 1920, including receipts from sales, etc.:

New work	\$3,212,068.99
Maintenance	2,067,187.93
Total expended	5,279,256.92
Appropriations to June 30, 1920:	
Construction and maintenance of military and post roads, bridges, and trails, Alaska	3,370,000.00
Wagon roads, bridges, and trails, Alaska fund	2,128,569.89
Funds contributed by Territory of Alaska for roads, bridges, and ferries, Alaska special fund	178,685.08
Total	5,677,254.97

Fiscal year ending June 30.	1916	1917	1918	1919	1920
Expended for improvement and new work	\$139,217.62	\$374,738.90	\$322,591.73	\$114,829.11	\$185,190.66
Expended for maintenance	161,503.00	202,009.00	274,428.45	184,195.15	173,410.59
Total expended	300,720.62	576,747.90	597,020.18	299,024.26	358,601.25
Appropriated by Army act	165,000.00	500,000.00	500,000.00	100,000.00	100,000.00
Allotted from Alaska fund	164,402.30	50,000.00	256,000.00	35,000.00	124,992.96
Contributed by Territory of Alaska					115,517.94
Total	329,402.31	550,000.00	756,000.00	135,000.00	340,510.90

July 1, 1919, balance unexpended	\$37,266.22
Amount appropriated by Army act approved July 11, 1919	100,000.00
Amount allotted from Alaska fund	124,992.96
Amount contributed by Territory of Alaska	115,517.94
Receipts from sales, etc., during fiscal year 1920	324.75
	378,101.87
June 30, 1920, amount expended during fiscal year, including receipts from sales, etc.:	
New work	\$185,190.66
Maintenance	173,410.59
	358,601.25

July 1, 1920, balance unexpended	19,500.62
July 1, 1920, outstanding liabilities	19,500.62
Amount appropriated by Army act approved June 5, 1920	350,000.00
Amount available from Alaska fund on June 30, 1920	158,742.43
Amount available from funds contributed by the Territory of Alaska June 30, 1920	77,500.52
Amount available for fiscal year ending June 30, 1921	586,242.95
Amount that can be profitably expended in fiscal year ending June 30, 1922	955,000.00

\* \* \* \* \*



20 linear feet of approach, 18 feet wide, was culverts were built and a small amount of gravel. Total cost of maintenance, \$8,486.11, with improvement, which is charged to construction; total,

*to Sourdough (21.5 miles).*—Last season this road was well dragged and maintained. The whole road was well dragged and improved this spring. Cost of maintenance, improvement and construction, \$6,015.12; total, \$12,129.19.

*to mile 168 (13.2 miles).*—This has always been a problem on account of poor material. It was the same this section with gravel. Gravel pits were located but owing to reduction in appropriation surplus it cannot be continued. The portion of the road between Hogan and Hogan should be relocated before heavy improvement.

The line can be materially shortened, adverse conditions a much lower summit can be secured, which was earlier in the season. During the spring the road was graded, the machines making 56 miles. Cost of maintenance; improvement and construction, \$7,401.42;

*8-Delta River Road (38.8 miles).*—A 10-mile section between Meiers and Paxsons is still in poor condition. Maintenance and minor repairs have been possible; north what was formerly a troublesome section improved. About 5 of the 23 miles of machine graded a good material, which will not require surface. The sides general repairs, consisted of dragging to the sides. Nine culverts were constructed; 8 were repaired. This has always suffered heavy damages from high water break-up and from floods during the summer. Damages last spring were very slight. Expense, \$5,363.59; improvement and construction, \$96.89.

*River-McCarthy Road (73.4 miles).*—During the summer miles of road were constructed on a new location; generally and put in good condition. During the summer repairs were made. A new pier was built at the mile and a half mile of clearing was done, and road was improved. Expended for maintenance, \$15,201.18; for construction, \$15,288.75; total, \$30,488.93.

*Richardson Road (20.6 miles).*—Road was improved. Bridges and culverts repaired, and 4.6 acres of land with the intention of grading next season. Road was improved during the summer. In spring of 1920 two bridges were constructed having 12-foot span and the other 45-foot span. The road was graded and 1 mile of clearing was done. Gravel surfaced; 6 miles of ditch cleaned and culverts were built or repaired. Road was also repaired. Expended for maintenance, \$5,020.21, with \$2,520.20 for construction; total, \$7,540.41.

*Richardson-Salchaket Road (30 miles).*—Road was improved. Timber was slashed where clearing was too

narrow for sun to reach road. In the spring of 1920 about one-quarter mile of new road was constructed along the side line north of Richardson to avoid encroachment of Tanana River. Cost of maintenance, \$9,071.15.

*Route 4K. Salchaket-Fairbanks Road (40 miles).*—Road was maintained in good condition during the season. Owing to shortage of funds, work was restricted to necessary general repairs and dragging. During the spring general repairs were made—7,500 feet of ditch cleaned and enlarged, 5 culverts were rebuilt and 4 culverts constructed, 14 gravel pits were cleared, drags made one trip over road, and 5 miles of road were graded by machine. The expense for maintenance was \$5,213.28, with approximately \$5,000 for improvement and construction; total, \$10,213.28.

*Route 6A. Willow Creek to Tonsina (24 miles).*—Road was well maintained during the 1919 season. In the spring of 1920 light general repairs were made. Cost of maintenance, \$5,725. and \$7,282 cost of improvement and construction; total, \$13,007.

*Route 6B. Tonsina to Chitina (15 miles).*—Road was well maintained during past season. In the spring of 1920 drags made 26 miles; 40 linear feet of culvert repaired and 184 linear feet of culverts were constructed; 184 linear feet of bridge was built and general repairs were made. Cost of maintenance, \$8,000; construction and improvement, \$7,722.71; total, \$15,722.71.

*Detailed summary of work accomplished on Richardson Road from July 1, 1919, to December, 1919.*

Clearing and grubbing	acres	38.7
Grading	cubic yards	10,943.0
Machine grading	miles	50.1
Machine regrading	do	48.1
Culverts rebuilt and repaired	linear-foot span	429.0
Culverts constructed	do	394.0
Bridges rebuilt and repaired	do	504.0
Bridges constructed	do	182.0
Gravel surfacing	miles	13.0
Side ditches enlarged	do	28.6
Dragging road, mileage of three-way machines		677.0
River control dikes, revetments, etc	linear feet	980.0
Placing corduroy	miles	.5

The working crews for the 1919 season of four months averaged one man for 3½ miles of road.

REPORT OF YUKON DISTRICT.

District engineer, C. G. Morrison, July 1, 1919, to January 1, 1920; Daniel A. Jones, March 1, 1920, to June 30, 1920.

*Route 5. Fairbanks-Fort Gibbon Sled Road (148 miles).*—Repairs were made to several small bridges on the section between Fort Gibbon and St. James Mission. General maintenance work was done on the trail. Total expenditures, \$2,405.76.

*Route 9. Rampart-Eureka Road (6½ miles road, 21½ miles sled road).*—Repairs and maintenance on this route were carried on during the season. Work consisting of surfacing bad spots with gravel, re-ditching, repairing culverts, etc. A footbridge was constructed over Granite Creek. Total expenditures, \$779.50.

*Route 11A. Eagle-O'Brien Creek Road (17 miles road, 30 miles sled road).—*General maintenance and repairs. The work consisting of clearing obstructions, ditching, graveling, surfacing, construction and repairs of bridges and culverts, etc. Total expense, \$3,068.18.

*Route 11C. Steel Creek and Jack Wade Creek (2.5 miles).—*The winter trails in the Forty Mile district were maintained, obstructions were removed, bridges and culverts were repaired. Total expenditures for maintenance, \$346.50.

*Route 15. Circle-Miller House Road (49 miles road).—*The entire road was maintained and extensive improvements were made on the 10-mile section between miles 35 to 45 out of Circle. The work consisted mainly of regrading, ditching, repairing of culverts and bridges. Improvements were also made to branch road leading to Deadwood Creek, formerly maintained by the Territorial commission. During the spring the main work was fighting forest fires to prevent the destruction of bridges and culverts and the building of branch roads around the burned structures. Total expenditures, \$5,912.60. Maintenance, \$3,011.30; construction, \$2,901.30.

*Route 16. Chatanika-Miller House Sled Road (81 miles sled road).—*The repairs to bridges on this route were made during the month of September, the work being confined between miles 38 and 66. Eight small bridges were rebuilt or repaired and 75 feet of cribbing constructed along the bank of the Chatanika River and Kokomo Creek. Expenditures, \$1,136.98. Maintenance, \$996.72; construction, \$140.26.

*Route 17. Fort Gibbon-Kaltag Trail (257 miles trail).—*Work consisted of staking the trail after the Yukon River was frozen over. Cost of maintenance, \$300.

*Route 20D. Takotna-Ophir Road (23.5 miles; 16 miles trail, 7.4 miles road).—*No work has been done on this route since 1917. The last work left a 16-mile gap between the two terminals. In the spring of 1920 a cooperative agreement was made with the Territory to reopen this work. The territory allotted \$8,000 and the Alaska Road Commission made an allotment of \$22,000 contingent upon a \$350,000 appropriation. A foreman was sent into this district from Fairbanks and equipment was ordered shipped from Seattle on first steamer into the Kuskokwim district. Work was well under way in June, but owing to difficulty of communication no reports have yet been received. Fortunately, the \$350,000 appropriation was granted, and it is expected to complete the project and gain the full benefit of the former work. This road serves a very productive mining district and is a most worthy project. Expenditures, \$363.

*Route 22. Hot Springs and Sullivan Creek Road (9 miles road).—*General maintenance work was done in the fall of 1919. No work had been done since 1917 and road was in very bad condition. Hill section was regraded and drainage ditches were opened. Road was cleared and widened where necessary, with the usual repairs to bridges and culverts. Maintenance cost, \$2,165.37; construction, \$921.30; total, \$3,086.67.

*Route 23A. Chatanika-Beaver trail. —*No work was done on this route. An allotment of \$500 was made for the repair of bridges, but it was impracticable to send men from a distance and no local labor was available.

*Route 30. Hot Springs and Eureka Road (* made to this road during the fall of 1919. Work section between town of Hot Springs and the ring chiefly of graveling, surfacing, clearing, and Expenditures, \$478.71, for maintenance.

*Route 38A. Ruby-Long Creek Road. —*General the season of 1919. Work consisting of regrading, surfacing, clearing and enlarging ditches. Necessary to bridges and culverts. In the spring the entire over during the month of June; 18 miles being of gravel were used in filling mud holes. Six were constructed and a 12-foot bridge was built \$3,115.41.

*Brooks Terminal. —*Last winter 28 miles of constructed from the railroad to the log jam. 614.23. The Livengood Road and Amy Creek b repaired and maintained, at a cost of \$2,368.4 Brooks Terminal, \$6,982.68.

*Fairbanks Bridge. —*Necessary repairs were during the season. Work consisted of reinforcement and repairing the floor of the north approach \$77.28.

SOUTHWESTERN ALASKA.

ANTON EIDE, SUPERINTENDENT.

*Route 12. Mile 34-Hope Road (31 miles way, road). —*Road was generally maintained at a cost

*Route 24. Moose Pass (29.5 miles road). —*M of replacing corduroy, repairing culverts, removal general repairs. Cost, \$1,111.88.

*Route 35. Knik-Willow Creek (34 miles). —*T mines of the Willow Creek district with the Go Wasilla. Work was restricted to general maintenance slides and dragging. Cost, \$4,122.24.

*Palmer-Mile 26½ Road. —*Connects Government with the Knik-Willow Creek Road at mile 26½. few small farms. Six acres of right of way cleared, cost, \$512.18.

*Talkeetna-Cache Creek Road survey. —*In the survey was commenced for a wagon road from Creek, a distance of 42 miles. This work will be with the Territory. The allotment of the Alaska is \$45,000 and that of the Territory \$30,000; to a very promising project and it is expected to continuing one until completed. This road will feeder to the Government railroad.

*Route 10. Seward-Kenai Lake Road (9.5 miles, at mile 3 in order to get above high water when is in flood. Cost, \$259.20. Surfaced 4,100 feet and 7; cost, \$615. General maintenance from Road is in very good condition. Expended \$ nance. The road was extended 2½ miles to mile*



of 1919 and an exceptionally good piece of work was done. Although there was considerable rock work, the construction cost was only \$12,842.50. The extension work was done under cooperative agreement. The Alaska Road Commission allotment was \$9,554.73, with \$5,000 for the Territory and \$10,000 for the Department of Agriculture, a total of \$24,554.73. It is the intention to extend this road to Kenai Lake, about 23 miles from Seward. In June the survey was in progress and about 25 men were employed clearing and grading.

*Quartz Creek-Russian River Road (20 miles).*—It is planned to build from mile 8, on the Moose Pass Road, down Quartz Creek to Kenai Lake, then down the Kenai River to Russian River. The road will serve about 25 settlers and will open up a potentially rich farming country. Reconnaissance was made last of May. In June location survey was under way and about 2 miles of right of way had been cleared. This is a cooperative project, \$45,000 being furnished by the Department of Agriculture and \$15,000 by the Territory. Expenditures to June 30, approximately \$5,000.

*Katalla-Chilkat Road (8 miles).*—Reconnaissance was made in 1919. Road will materially assist in the development of the Katalla oil and Bering River coal fields. Work was started in June, 1920. Bridge material was being delivered, one bridge gang was at work and grading was under way. Approximately \$7,000 expended for construction. This is a cooperative project, the Department of Agriculture furnishing \$18,000 and the Territory \$6,000, a total of \$24,000.

#### NOME DISTRICT—SEASON.

Superintendent, D. A. Jones, July 1, 1919, to March 1, 1920; C. D. Jones, March 1, 1920, to June 30, 1920.

*Route 8 Nome-Council Road (total length, 82 miles).*—Nome-Fort Davis section connects Nome and Fort Davis, serving Fort Davis and all mining districts east of Nome. Estimated 500 tons hauled during season. Mail service weekly, summer and winter. Work consisted of general maintenance and protection during spring break-up. Five thousand linear feet resurfaced with gravel, one culvert 2 by 3 by 24 constructed, 800 feet of ditch cleaned and widened. Total cost, \$2,149.73.

*Fort Davis-Cape Nome section, 9 miles (8 constructed).*—This road connects Fort Davis with Cape Nome. Within the year approximately 300 tons were hauled over the road. Three and one-quarter miles were constructed during the 1919 season and entire road maintained. The new construction is 18 feet wide and is a gravel fill of from 2½ to 4 feet in depth, in many places material being placed on a mat of willow brush corduroy. Forty 2 by 2 by 20 culverts were constructed. The culverts, including excavation, cost \$43.60 each. The cost of lumber was \$100 per thousand. Three thousand eight hundred and ninety feet of ditch, averaging 2 by 3 feet, were cut at a cost of 19 cents a foot, the high cost of the ditching being due to permanently frozen ground. Two bridges were built, one at Golden Gate Creek and the other at Derby Creek. The Derby Creek bridge is a 16-foot span. Total cost, \$286.50 for labor and material. The Golden Gate Creek bridge is a 32-foot span. Cost for labor and material, \$476.50. Total cost for year, \$24,531.51.

*Cape Nome section (2 miles).*—Road is built for hauling about 100 tons of freight a year are hauled; 100 tons. With the connecting up of the Cape Nome sections, a regular auto stage line will be operated between Cape Nome, Safety and Nome. Work consisted of general maintenance, \$837.37.

*Safety Ferry.*—Cost of maintenance and repairs, \$837.37.

*Bonanza Ferry.*—Expenditures are for salaries and maintenance of ferry, and for the construction of new ferry.

*Solomon-East Fork (15 miles).*—Connects East Fork-Council Road. Supplies the Solomon section. Averages about 8 tons daily. Work consisted of general maintenance and repair; 1,100 feet being corduroyed with gravel. Road was widened in several places. Total cost, \$1,784.93.

*East Fork-Council Road.*—Road connects Solomon-Council Corduroy. Weekly main service in summer. Approximately 200 tons are hauled over road each season during year.

*Council Corduroy (5½ miles).*—Road connects Council City. Mail service weekly in summer.

*Council.*—This road connects Council City with East Fork-Council Road. Work consisted of general repair and upkeep.

*Route 13A. Nome-Bessie (3.3 miles).*—This road connects Nome with the third beach line and is the connecting link coming into Nome from the north. Work consisted of general maintenance, \$738.80.

*Route 13B. Bessie-Banner (3.45 miles).*—This road connects Banner with Anvil and Glacier Creeks. About 10 tons are hauled daily. Work consisted of general maintenance and repair, \$71.05.

*Route 13C. Bessie-Little Creek (1.25 miles).*—This road connects Little Creek and serves all beach line. About 10 tons daily pass over this road during season. Work consisted of general maintenance and repair, \$71.05.

*Route 13D. Bessie-Dry Creek (1.25 miles).*—This road connects Dry Creek and Nome-Osborn Roads. About 100 tons of freight are hauled. No expenditures.

*Route 13E (4 miles).*—Connects Bessie with Osborn Creek and its tributaries. About 100 tons are hauled over this road. General maintenance and repair, \$71.05.

*Route 13G. Grass Gulch (1.75 miles).*—This road connects King Mountain. At present very little freight is hauled over road, but it will always be used to some extent during year.

*Route 13I. Nome River Extension (5 miles).*—This road connects Upper Nome River and all its tributaries. About 100 tons per month are hauled. Road follows the old location from the end of construction to the head, and is being constructed to form a section of the main trunk line to the interior. Work consisted of general maintenance, \$284.45.

ionally good piece of work was done. Although the rock work, the construction cost was only \$10,000. Extension work was done under cooperative agreement with the Road Commission allotment was \$9,554.73, with \$10,000 for the Department of Agriculture. It is the intention to extend this road to 5 miles from Seward. In June the survey was in progress and 5 men were employed clearing and grading.

*Kenai River Road (20 miles).*—It is planned to connect the Moose Pass Road, down Quartz Creek to the Kenai River to Russian River. The road will be built by private settlers and will open up a potentially rich farming area. Reconnaissance was made last of May. In June local farmers and about 2 miles of right of way had been secured. This is a cooperative project, \$45,000 being furnished by the Department of Agriculture and \$15,000 by the Territory. Total cost, approximately \$5,000.

*Coal Road (8 miles).*—Reconnaissance was made in order to materially assist in the development of the Katalla coal fields. Work was started in June, 1920, and a bridge being delivered, one bridge gang was at work on the road. Approximately \$7,000 expended for a cooperative project, the Department of Agriculture, \$3,000 and the Territory \$6,000, a total of \$24,000.

#### NOME DISTRICT—SEASON.

A. Jones, July 1, 1919, to March 1, 1920; C. D. Jones, to June 30, 1920.

*Council Road (total length, 82 miles).*—Nome-Fort Davis section, serving Fort Davis and Nome. Estimated 500 tons hauled during the season, weekly, summer and winter. Work consisted of general maintenance and protection during spring break-up. Road was resurfaced with gravel, one culvert 2 by 3 feet and 800 feet of ditch cleaned and widened. Total cost, \$24,531.51.

*Cape Nome section, 9 miles (8 constructed).*—This road connects Cape Nome with Cape Nome. Within the year approximately 100 tons are hauled over the road. Three and one-quarter miles were constructed during the 1919 season and entire road maintenance is 18 feet wide and is a gravel fill of 18 inches depth, in many places material being placed on a gravel corduroy. Forty 2 by 2 by 20 culverts were installed, including excavation, cost \$43.60 each. Total cost was \$100 per thousand. Three thousand eight hundred feet of ditch, averaging 2 by 3 feet, were cut. At Cape Nome, the high cost of the ditching being due to the soft ground. Two bridges were built, one at Golden Gate and other at Derby Creek. The Derby Creek bridge cost \$286.50 for labor and material. The bridge is a 32-foot span. Cost for labor and material cost for year, \$24,531.51.

*Cape Nome section (2 miles).*—Road is built around Cape Nome. About 100 tons of freight a year are hauled; mail service is weekly. With the connecting up of the Cape Nome and Fort Davis-Cape Nome sections, a regular auto stage line will be operated between Cape Nome and Nome. Work consisted of general maintenance. Cost, \$837.37.

*Safety Ferry.*—Cost of maintenance and repair, \$705.13.

*Bonanza Ferry.*—Expenditures are for salary of ferryman, maintenance of ferry, and for the construction of new scow, \$1,654.97.

*Solomon-East Fork (15 miles).*—Connects Bonanza Ferry with East Fork-Council Road. Supplies the Solomon district. Traffic averages about 8 tons daily. Work consisted of general maintenance and repair; 1,100 feet being corduroyed with willows and covered with gravel. Road was widened in several places. Total cost, \$1,784.93.

*East Fork-Council Road.*—Road connects Solomon-East Fork with Council Corduroy. Weekly main service in summer. Approximately 200 tons are hauled over road each season. No expenditures during year.

*Council Corduroy (5½ miles).*—Road connects Fox River with Council City. Mail service weekly in summer. No expenditures.

*Council.*—This road connects Council City with Ophir Creek. Work consisted of general repair and upkeep. Cost, \$1,724.29.

*Route 13A. Nome-Bessie (3.3 miles).*—This road connects Nome with the third beach line and is the connecting link for all roads coming into Nome from the north. Work consisted of general maintenance, \$738.80.

*Route 13B. Bessie-Banner (3.45 miles).*—Road connects Bessie with Anvil and Glacier Creeks. About 10 tons are hauled over it daily. Work consisted of general maintenance. Cost, \$195.

*Route 13C. Bessie-Little Creek (1.25 miles).*—Connects Bessie with Little Creek and serves all beach line west of Bessie. Estimated 10 tons daily pass over this road during open season. Cost of general maintenance and repair, \$71.05.

*Route 13D. Bessie-Dry Creek (1.25 miles).*—Connects Nome-Bessie and Nome-Osborn Roads. About 100 tons of freight hauled per year. No expenditures.

*Route 13E (4 miles).*—Connects Bessie with Osborn Creek and supplies Osborn Creek and its tributaries. About 100 tons a year are hauled over this road. General maintenance, \$333.

*Route 13G. Grass Gulch (1.75 miles).*—Connects Nome-Dexter with King Mountain. At present very little hauling is being done over road, but it will always be used to some extent. No expenditures during year.

*Route 13I. Nome River Extension (5 miles).*—Connects Dexter with Upper Nome River and all its tributaries. About 10 tons of freight per month are hauled. Road follows the bars of Nome River from the end of construction to the head, and it is ultimately expected to form a section of the main trunk line to the Seward Peninsula interior. Work consisted of general maintenance, costing \$284.45.



*Lat Road (2 miles).*—Connects Bessie-Little at, and Lower Little Creek. About 5 tons maintenance cost \$52.66.

*Star (5 miles).*—Connects Bessie with Dexppling all tributary creeks and Upper Nome of freight per month are hauled. Expended \$211.

*erry.*—General maintenance and salary of

*River Road (12 miles).*—Connects coast with dredge is operating on Arctic Creek, addition to be done in the near future. Expenditure \$168.

*er Road (12 miles).*—Combination road and mouth of Penny River and Oregon Creek. Expenditure \$78.

*Center Creek (2.25 miles).*—Road connects water Creek, supplies Lower Snake River and camps. About 2 tons of freight per day are hauled. Maintenance, \$153.

*er Bridge.*—Due to the continual raising of the bridge by ice and frost conditions, some extensive repairs were made on this bridge during the present season.

*acier (3 miles).*—Connects Bessie-Banner Road, supplying Glacier Creek and all Snake River. About 5 tons of freight are hauled each year. Cost \$96.

*er Extension (3 miles).*—Connects Anvil-Snake River and tributaries. About 5 tons of freight are hauled each year. Cost \$164.

*k (9 miles).*—Connects Candle with Candle Lake road constructed on mat of willows, covered then surfaced with gravel; 4½ miles main-tenance cleared and repaired. Cost of new construction and repair, \$2,346.50.

*uchuk (25 miles).*—Connects Deering with Deering and tributaries. About 5 tons were hauled each year. Cost, \$3,120.48.

*Candle Trail (140 miles).*—This is a permanent trail from Dahl Creek to Candle. The work done during the present season consisted of repairing and replacing broken stakes, the cost being

Expenditure was for maintaining permanent trails, and staking the temporary trails. A statement of permanent and seasonal, follows:

Name.	Dis-	Perma-	Sea-
	tance.	nent.	sonal.
	Miles.	Miles.	Miles.
Nome to Unalakleet.....	251	175	76
Dahl Creek to Candle.....	140	140	
Unalakleet to Kaltag.....	90	90	
Unalakleet to St. Michael.....	60	40	20
St. Michael to Kotlik.....	60	35	25
Topkok to Candle.....	154	154	
Nome to Taylor.....	140	115	25
Nome to Arctic Hot Springs.....	17	10	7
Taylor to Teller.....	90	90	
Nome to Marys Igloo.....	52	20	32
Teller to Deering.....	40	40	
Candle to Keewalik.....	9		8
Keewalik to Nazurik Channel (mouth of Kobuk River).....	45		45
Kotzebue to Riley Channel.....	17		17
Kiana to Klery Creek.....	18	18	
Solomon to Casadepaga.....	50	16	34
Isaacs Point to Dime Creek.....	50	34	16
Keewalik to Mainland by Chamois Island.....	35		35
Dime Creek to Snyders Cabin on Keewalik River.....	35	35	
Total.....	1,352	1,012	340

In addition there are approximately 100 miles of trails staked to different camps and creeks in the district each year according to work going on in different localities, the same being staked by the freighters themselves with flagged lath furnished by the commission. Total cost, \$5,841.10.

*Fortuna Ledge, or Marshall City Road (4½ miles).*—Freight is landed from river steamers and transferred by light-draft boats a distance of 12 miles from the landing to Willow Creek, the scene of operations. About 300 tons were hauled over the road. No expenditure made.

*Route 49, Davidsons Landing-Taylor Creek Road (40 miles, 24 constructed).*—This road runs from Davidsons Landing, the end of water navigation, to Taylor Creek. Over 600 tons were hauled over it. No expenditure made on this route.

*Nome local roads.*—There was expended upon the local roads radiating from Nome for general maintenance and repairs not distributed to individual roads \$1,254.

*Dime Creek Corduroy (6½ miles).*—Will connect Dime Creek Landing on Koyukuk River with Haycock. In 1918 Territorial commission laid 3 miles of pole and brush corduroy road at a cost of \$22,000. Work during past year consisted of purchase of 9,200 poles which are to be laid during the present season. Cost of work \$4,630.

STATEMENT OF RECEIPTS AND DISBURSEMENTS.

This report covers vouchers received and placed in the account including June 30, 1920:

Balance on hand July 1, 1919.....	\$12,266.22
Received since from—	
Treasury drafts.....	70,624.31
Transfers from officers.....	383,210.55
Sales of property, Alaska fund.....	208.00
Collections.....	116.75
	466,425.83

2104 REPORT OF CHIEF OF ENGINEERS, U. S. ARMY, 1920.

Transferred to officers.....	\$76,000.00	
Deposited to credit Treasurer of United States.....	12,618.87	
		\$88,618.87
Total.....		377,808.96
Disbursed as per tabulated statement below.....		358,601.25
Balance on hand.....		19,207.71

Expenditures in detail.

Federal appropriations and "Alaska fund."	Construction.	Maintenance.	Total.
Office.....	\$5,202.23	\$4,610.27	\$9,812.50
Route 1.....	2,322.52	1,206.25	3,528.77
Route 2.....	2,150.11	2,150.11	4,300.22
Route 2A.....	8,487.69	1,100.30	9,587.99
Route 3.....		664.00	664.00
Route 4A.....		1,904.00	1,904.00
Route 4B, 1st section.....			4,533.66
Route 4B, 2d section.....			4,138.33
Route 4B, 3d section.....			2,495.65
Route 4B, 4th section.....		15,548.29	1,690.78
Route 4B, 5th section.....			1,420.74
Route 4B, 6th section.....			1,270.34
Route 4C.....		4,038.28	4,038.28
Route 4D.....	8,411.30	8,486.11	16,897.41
Route 4E.....	6,015.12	6,114.07	12,129.19
Route 4F.....	7,401.42	8,431.37	15,832.79
Route 4G.....	7,133.30	5,363.59	12,496.89
Route 4H.....	15,288.75	15,200.18	30,488.93
Route 4I.....	2,520.20	5,020.21	7,540.41
Route 4J.....		9,071.15	9,071.15
Route 4K.....		9,213.28	9,213.28
Route 5.....		2,405.76	2,405.76
Route 6A.....	7,282.00	5,725.00	13,007.00
Route 6B.....	7,722.71	8,000.00	15,722.71
Route 8.....	2,577.21	9,102.49	11,679.70
Route 9.....		627.50	627.50
Route 10.....	7,842.50	2,159.48	10,001.98
Route 11A.....		2,267.38	2,267.38
Route 11C.....		346.50	346.50
Route 12.....		875.30	875.30
Route 13A.....		498.10	498.10
Route 13B.....		310.75	310.75
Route 13C.....		62.65	62.65
Route 13F.....		200.80	200.80
Route 13I.....		63.16	63.16
Route 13J.....		52.66	52.66
Route 13K.....		334.00	334.00
Route 15.....		1,313.97	1,313.97
Route 16.....		136.98	136.98
Route 17.....		300.00	300.00
Route 20D.....	363.00		363.00
Route 22.....	112.49		112.49
Route 24.....		1,127.73	1,127.73
Route 25A.....		163.00	163.00
Route 25E.....		64.50	64.50
Route 25F.....		366.40	366.40
Route 25G.....		237.58	237.58
Sinrock Ferry.....		155.00	155.00
Route 26.....		386.85	386.85
Route 27.....		1,206.37	1,206.37
Route 28.....		250.00	250.00
Route 30.....		15.00	15.00
Route 32A.....		77.75	77.75
Route 35.....		4,122.24	4,122.24
Route 38A.....		790.82	790.82
Route 39.....		2,296.55	2,296.55
Route 43.....		3,682.86	3,682.86
Route 44.....		112.25	112.25
Route 45.....	1,961.12	4,002.60	5,963.72
Fairbanks Bridge.....		77.28	77.28
Brooks Terminal.....	2,071.89	2,368.45	4,440.34
Flagging trails.....		3,877.23	3,877.23
Kougarok.....		13.80	13.80
Palmer, Twenty-six-and-a-half Mile Road.....	567.17		567.17
Matanuska Bridge.....		780.43	780.43
Ketchikan-Wards Cove.....	6,701.63		6,701.63
Talkeetna-Cache Creek Trail.....	119.50		119.50
Total.....	102,253.86	155,162.83	257,416.69

BOARD OF ROAD COMMISSIONERS FOR

Expenditures in detail—Continued

Federal appropriations and "Alaska fund."	Construction
Funds contributed by the Territory of Alaska:	
Route 1.....	\$7,995.00
Route 2A.....	14,870.00
Fairbanks local roads.....	
Route 8.....	18,585.30
Route 9.....	
Route 10.....	5,000.00
Route 11A.....	
Route 131.....	
Route 15.....	2,901.30
Route 16.....	3.28
Route 22.....	921.30
Nome local roads.....	
Route 25G.....	
Bonanza Ferry.....	
Safety Ferry.....	
Sinrock Ferry.....	
Route 26.....	6,137.87
Route 27.....	
Route 30.....	
Route 38A.....	
Route 43.....	1,500.00
Brooks Terminal.....	2,542.34
Flagging trails.....	
Dime Creek Corduroy.....	3,160.28
Ketchikan-Wards Cove.....	19,318.44
Total.....	82,936.80
Grand total.....	185,190.66

Distribution of expenditures.

Salaries (superintendents and clerks).....	
Wages (all other labor).....	
Transportation (persons).....	
Transportation (freight).....	
Hire of animals (horses and dogs).....	
Subsistence (persons, meals, and beds).....	
Provisions (all food supplies).....	
Forage and care of animals (horseshoeing, veterinary supply).....	
Telegraph, telephone, and postage.....	
Fuel (coal and wood) and light.....	
Construction material.....	
Equipment, tools, camp equipage, wagons, harness, etc.....	
Stationery and drafting supplies, maps, printing, cleaning, articles.....	
Barns (offices, post-office boxes, barns, or equipment).....	
Motor vehicles, repairs, gas, operation, maintenance.....	
Miscellaneous.....	
Total.....	

APPROPRIATIONS.

CONSTRUCTION AND MAINTENANCE MILITARY AND POST ROADS, ALASKA.		Act of—	
Act of—			Act of—
June 12, 1906.....			Mar. 4, 1915.....
Mar. 2, 1907.....	\$150,000.00		Aug. 29, 1916.....
May 11, 1908.....	250,000.00		July 9, 1917.....
Mar. 3, 1909.....	250,000.00		July 9, 1918.....
Mar. 23, 1910.....	350,000.00		July 11, 1919.....
Mar. 3, 1911.....	100,000.00		June 5, 1920.....
Aug. 24, 1912.....	150,000.00		Total.....
Mar. 2, 1913.....	125,000.00		
Apr. 27, 1914.....	155,000.00		
	125,000.00		



----- \$76,000.00  
 per of United States ----- 12,616.87  
 ----- \$88,616.87  
 ----- 377,808.96  
 statement below ----- 358,601.25  
 ----- 19,207.71

Expenditures in detail.

"Alaska fund."	Construction.	Maintenance.	Total.
	\$5,202.23	\$4,610.27	\$9,812.50
	2,322.52	1,206.25	3,528.77
	2,150.11	2,150.11	4,300.22
	8,487.69	1,100.30	9,587.99
		664.00	664.00
		1,904.00	1,904.00
			4,533.05
			4,138.33
		15,548.29	2,495.05
			1,690.78
			1,420.74
			1,270.34
		4,038.28	4,038.28
	8,411.30	8,486.11	16,897.41
	6,015.12	6,114.07	12,129.19
	7,401.42	8,431.37	15,832.79
	7,133.30	5,363.59	12,496.89
	15,288.75	15,200.18	30,488.93
	2,520.20	5,020.21	7,540.41
		9,071.15	9,071.15
		5,213.28	5,213.28
		2,405.76	2,405.76
			2,405.76
	7,282.00	5,725.00	13,007.00
	7,722.71	8,000.00	15,722.71
	2,577.21	9,102.49	11,679.70
		627.50	627.50
	7,842.50	2,159.48	10,001.98
		2,267.38	2,267.38
		346.50	346.50
		875.30	875.30
		498.10	498.10
		310.75	310.75
		62.65	62.65
		200.80	200.80
		63.16	63.16
		52.66	52.66
		334.00	334.00
		1,313.97	1,313.97
		136.98	136.98
		300.00	300.00
	363.00		363.00
	112.49		112.49
		1,127.73	1,127.73
		168.00	168.00
		64.50	64.50
		366.40	366.40
		237.58	237.58
		155.00	155.00
		386.85	386.85
		1,206.37	1,206.37
		250.00	250.00
		15.00	15.00
		77.75	77.75
		4,122.24	4,122.24
		790.82	790.82
		2,296.55	2,296.55
		3,682.86	3,682.86
		112.25	112.25
	1,961.12	4,002.60	5,963.72
		77.28	77.28
	2,071.89	2,368.45	4,440.34
		3,877.23	3,877.23
		13.80	13.80
Road	567.17		567.17
		780.43	780.43
	6,701.63		6,701.63
	119.50		119.50
	102,253.86	155,162.83	257,416.69

Expenditures in detail—Continued.

Federal appropriations and "Alaska fund."	Construction.	Maintenance.	Total.
Funds contributed by the Territory of Alaska:			
Route 1	\$7,995.98		\$7,995.98
Route 2A	14,870.66		14,870.66
Fairbanks local roads		\$143.75	143.75
Route 8	18,585.35		18,585.35
Route 9		152.00	152.00
Route 10	5,000.00		5,000.00
Route 11A		800.80	800.80
Route 131		130.75	130.75
Route 15	2,901.30	1,697.33	4,598.63
Route 16	3.28	996.72	1,000.00
Route 22	921.30	2,052.88	2,974.18
Nome local roads		1,254.00	1,254.00
Route 25G		89.00	89.00
Bonanza Ferry		359.80	359.80
Safety Ferry		299.75	299.75
Sirock Ferry		100.00	100.00
Route 26	6,137.37	1,959.65	8,097.02
Route 27		2,000.00	2,000.00
Route 30		463.71	463.71
Route 38A		2,324.59	2,324.59
Route 43	1,500.00		1,500.00
Route 45	1,500.00	2,000.00	3,500.00
Brooks Terminal	2,542.34		2,542.34
Flagging trails		1,423.03	1,423.03
Dime Creek Corduroy	3,160.28		3,160.28
Ketchikan-Wards Cove	19,318.44		19,318.44
Total	82,936.80	18,247.76	101,184.56
Grand total	185,190.66	173,410.59	358,601.25

Distribution of expenditures.

Salaries (superintendents and clerks)	\$15,634.33
Wages (all other labor)	181,500.30
Transportation (persons)	3,623.11
Transportation (freight)	11,176.97
Hire of animals (horses and dogs)	23,727.35
Subsistence (persons, meals, and beds)	13,002.37
Provisions (all food supplies)	44,519.13
Forage and care of animals (horseshoeing, veterinary supplies)	23,386.27
Telegraph, telephone, and postage	611.34
Fuel (coal and wood) and light	1,488.93
Construction material	13,052.11
Equipment, tools, camp equipage, wagons, harness, etc	11,004.46
Stationery and drafting supplies, maps, printing, cleaning, and toilet articles	608.16
Rents (offices, post-office boxes, barns, or equipment)	4,144.50
Motor vehicles, repairs, gas, operation, maintenance	10,198.15
Miscellaneous	923.77
Total	358,601.25

APPROPRIATIONS.

CONSTRUCTION AND MAINTENANCE MILITARY AND POST ROADS, BRIDGES, AND TRAILS, ALASKA.

Act of—	Amount	Act of—	Amount
June 12, 1906	\$150,000.00	Mar. 4, 1915	\$165,000.00
Mar. 2, 1907	250,000.00	Aug. 29, 1916	500,000.00
May 11, 1908	250,000.00	May 2, 1917	500,000.00
Mar. 3, 1909	350,000.00	July 9, 1918	100,000.00
Mar. 23, 1910	100,000.00	July 11, 1919	100,000.00
Mar. 3, 1911	150,000.00	June 5, 1920	350,000.00
Aug. 24, 1912	125,000.00		
Mar. 2, 1913	155,000.00	Total	3,370,000.00
Apr. 27, 1914	125,000.00		

OF ENGINEERS, U. S. ARMY, 1920.

UNITED STATES, ACCOUNT "ALASKA FUND."

ROADS AND TRAILS, ALASKA FUND.

1912	\$152,000.00
1913	228,000.00
1914	166,316.32
1915	171,824.31
1916	164,402.30
1917	50,000.00
1918	256,000.00
1919	35,000.00
1920	124,992.96
<b>Total</b>	<b>2,128,569.89</b>

0,000.00  
1,500.00  
3,584.00  
7,750.00  
5,200.00  
5,000.00  
5,000.00

