:PORT ALASKA ROAD COMMISSION.
one on this route between May 1st and Oct.
on fair.
30.37

ANIKA-BEAVER
(120 MILES TRAIL)
rinter trail between the Town of Chatanika, at ch line of the Government Railroad, and the the Yukon River, the latter place serving as
the Chandalar mining district.
en done on this trail since 1910.
a poor.
9.14 .

三R-CARO $\qquad$ (75 MILES SLED ROAD)
ects the Town of Beaver on the Yukon River tro in the Chandalar mining district.
$k$ was done between May 1st and June 30 th, ling a foreman from Fairbanks and assenbling
st and Oct. 31st, 1921, the crew worked over doing general repair work, including the buildd one culvert, the rebuilding of one old bridge, hes at Beaver and at Mile 55 and the repair. ns and placing good stoves in five relief cabins. man made a reconnaissance trip through the
in good.
i. 053.81 .

BIG CREEK
(45 MILES TRAIL)
cts Caro with the operations on Big and Tobin lle for Yukon and double-ender sleds. It could sled standard for about $\$ 5,000$.
reconnoitered and a Yukon stove placed in Mile 26. It is contemplated to put in a pas$r$ across Middle Fork for mushers.

Ђ. 00 .
FLAT CREEK.
(45 MILES SLED ROAD)
was built by the miners and is the route by ndled to Big Squaw, Little Squaw, and the, ljarent to the quartz mill. The output of last season was about $\$ 24,000$. One hundred ed over the road.

ANNUAL REPORT ALASKA ROAD COMMISSION.

The route was reconnoitered and a Yukon stove placed in Flat Creek Cabin at Mile 14. The road is in fairly good slape.

Hixpenditures $\$ 25.00$.

## ROUTE 23E-CARO-COLDFOOT

$\qquad$
Foreman Frank Irons, upon completing his work in the Beaver-Caro section, made a reconnaissance trip from Caro to Wise man with intent to locate a feasible winter route from the Yukon River through Caro to the Koyukuk District. The estimated distance from Caro to Coldfoot by this route is 75 miles and the estimated cost of building a suitable winter sled road is placed at $\$ 10,000.00$.

Expenditures $\$ 500.00$.

## ROUTE 29—FORT GIBBON-KOYUKUK

(240 MILES TRAIL)
This route is the old mail trail from Fort Gibbon on the Yukon Fiver to Coldfoot, the mining camp in the Koyukuk mining district. The route distance of this trail has formerly been given as 100 miles, which included the trail only as far as Arctic City. The actual distance is 240 miles

No work was done this year. Expenditures were for work done early in 1921.

Present condition good.
Expenditures $\$ 840.48$.

## ROUTE 30-HOT SPRINGS LANDING-EUREKA (24 MILES WAGON ROAD)

Tinis is a cooperative project partly supported by Territorial runds as described below

Alaska Road Commission expenditures $\$ 5,001.72$
ROUTE 46-KOBI-EUREKA CREEK $\qquad$
Connecting Kobi Station, (Mile 387 on Government Railroad) 24 miles south of Nenana, with Kantishna Postoffice at the mouth of Eureka Creek. This is a part of the original trail from Fairbanks to the Kantishna District, the portion from Fairbanks to Kobi Station being abandoned since the completion of the Rail road.

Present condition fair.
No expenditure.
ROUTE $\begin{aligned} & 46 A-R O O S E V E L T-K A N T I S H N A \text { ( } 34 \text { MILES WAGON } \\ & \text { ROAD) }\end{aligned}$
This is a cooperative project, supported partly by Federal finds, partly by Territorial funds disbursed through the U. S .

Treasury, and partly by Territorial funds disbursed by the divisional Territorial Road Commission.

Expenditures: Territory of Alaska, $\$ 1,283.75$; Alaska Road Commission, $\$ 7,680.34$; total, $\$ 8,964.09$.
ROUTE 46B-LIGNITE-KANTISHNA .................. (85 MILES TRAIL)
The route of this proposed road leads from Lignite Station, (Mile 363 on the Government Railroad), west across Middle, Chisana and Toklat Rivers, up Crooked Creek and down Bearpaw River to Glacier City and from there up Moose Creek. terminating at the Kantishna Postoffice.

Shortly after May 1st, 1921, a survey party was put in the field and during the next eighty days 54 miles of preliminary location were run. The road necessarily passes over the divides between the different rivers but the nature of the ground found was better than expected.

No winter work was done except for the blazing and tripoding of a winter dog trail through the same country which follows the wagon road location as near as is practicable.

Expenditures: Territory of Alaska, \$483.07; Alaska Road Commission, $\$ 11,483.84$; total, $\$ 11,966.91$.

ROUTE 46C-NENANA.KNIGHTS ROADHOUSE (42 MILES TRAIL)
Connects Town of Nenana on Tanana River (Mile 411 on the Government Railroad) with Knight's Roadhouse on the Toklat River at the mouth of Chisana River. Knight's Roadhouse is also on the Kobi-Diamond-Eureka Trail at Mile 26 and from this point travelers and freighters go on to the Kantishna District either via Diamond and Glacier Cities or on up the Toklat River and over Clearwater Summit. The trail was cut out during fall of 1920, the entire expense being borne by citizens of Nenana.

No work was done on this route by the Alaska Road Commission until the middle of November, 1921, when a small party was put in the field to widen and straighten it and to put shelter for travelers along the trail in two places.

Expenditures \$1,499.80.
ROUTE 46D-MT. MCKINLEY PARK TRAIL...... (86 MILES TRAIL)
This is a new project. The proposed trail will extend from Mt. McKinley Park Station, Government Railroad, Mile 344, across Mt. McKinley National Park, via Sable, Polychrome, Highway and Thorofare Passes, to the foot of Muldrow Glacier, then down the McKinley River, passing out of the Park to Wonder Lake and on to Kantishna Postoffice.

During this season, the trail will be brushed out and tripoded at confusing points, eight tents with small stoves will be erect.il

ANNUAL REPORT ALASKA R،
at about ten mile intervals for shelter: and sign boards placed at the princip:

The project has been prepared in tional Park Service, which will submi improvement as a trail as well as fo cessive sections to automobile standari demand. In conjunction with Route route, 171 miles long, from Mile 344, Go the Park to Kantishna Postoffice, and Mile 363 , through the finest hunting gro

No expenditure reported prior to $\epsilon$
ROUTE 4T-COLDFOOT-WISEMAN (1 N 11 MILES SLED ROAD)
Comnects towns of Coldfoot and Wis ing district.

No work done on this route sinc. winter freighting, supplies being brought as Coldfoot.

Road is in good condition.
No expenditures.
ROUTE 59-FAIRBANKS BRIDGE:
This steel structure is in good co upon it since spring, 1920, except $\$ 6.40$ crete piers. No work done this winter.

During summer bridge is to be repai for north approach.

Expenditure $\$ 6.40$.
ROUTE 63-DUNBAR-BROOKS.
This is a cooperative project partly funds as described below.
A. R. C. expenditures $\$ 366.50$.

ROUTE 63A-BROOKSTERMINAL
The Brooks-Terminal route formerly known as the Dunbar-Brooks Sled Road.
of 13 miles will connect Brooks with ts: the Tolovana River.

No expenditure.
ROUTE 76-GOVERNMENT R. R.-VALD TRAIL)
Connects McKinley Placer Company's prospertr on Valdez Creek, a branch of with the Government Railroad at Carlson's

ASKA ROAD COMMISSION.
itorial funds disbursed by the diviission.
of Alaska, $\$ 1,283.75$ : Alaska Road $\$ 8,964.09$.

ISHNA...
(85 MILES TRAIL)
sed road leads from Lignite Station, Railroad), west across Middle, Chisana ked Creek and down Bearpaw River lere up Moose Creek. terminating at 1921, a survey party was put in the hty days 54 miles of preliminary locaecessarily passes over the divides beat the nature of the ground found was
one except for the blazing and tripodrough the same country which follows near as is practicable.
ry of Alaska, $\$ 483.07$; Alaska Road al, $\$ 11,966.91$.
GHTS ROADHOUSE ( 42 MILES TRAIL) nana on Tanana River (Mile 411 on the th Knight's Roadhouse on the Toklat isana River. Knight's Roadhouse is also ka Trail at Mile 26 and from this point ${ }^{3}$ on to the Kantishna District either via es or on up the Toklat River and over trail was cut out during fall of 1920 , the e by citizens of Nenana.
on this route by the Alaska Road Comof November, 1921, when a small party viden and straighten it and to put shelter rail in two places.

## so.

VLEY PARK TRAIL..... (86 MILES TRAIL) iect. The proposed trail will extend from ion, Government Railroad, Wile 344 , across Park, via Sable, Polychrome, Highway and $\therefore$ foot of Muldrow Glacier, then down the $g$ out of the Park to Wonder Lake and tice.
the trail will be brushed out and tripoded , the trail will be brushed out all he erect:l
rht tents with small stoves will her
at about ten mile intervals for shelter, mile posts will be erected and sign boards placed at the principal points.

The project has been prepared in cooperation with the National Park Service, which will submit estimates for its further improvement as a trail as well as for the improvement of successive sections to automobile standard as traffic conditions may demand. In conjunction with Route 46 B , it will form a loop route, 171 miles long, from Mile 344, Government Railroad, through the Park to Kantishna Postoffice, and return to the Railroad at Mile 363 , through the finest hunting ground in Alaska.

No expenditure reported prior to end of fiscal year.
ROUTE 47 -COLDFOOT-WISEMAN ( 1 MILE WAGON ROAD AND. 11 MILES SLED ROAD)

Connects towns of Coldfoot and Wiseman in the Koyukuk mining district.

No work done on this route since 1917. Road used for winter freighting, supplies being brought up river on scows as far as Coldfoot.

Road is in good condition.
No expenditures.

## ROUTE 59-FAIRBANKS BRIDGE:

This steel structure is in good condition. No money spent upon it since spring, 1920 , except $\$ 6.40$ for cement facing on concrete piers. No work done this winter.

During summer bridge is to be repainted and replanked except for north approach.

Expenditure $\$ 6.40$.
ROUTE 63-DUNBAR-BROOKS $\qquad$ (63 MILES SLED ROAD)
This is a cooperative project partly supported by Territorial funds as described below.
A. R. C. expenditures $\$ 366.50$.

ROUTE 63A-BROOKS-TERMINAL........ (13 MILES WAGON ROAD)
The Brooks-Terminal route formerly included Route 63, now known as the Dunbar-Brooks Sled Road. The proposed wagon road of 13 miles will connect Brooks with the head of navigation on the Tolovana River.

No expenditure.
ROUTE 76-GOVERNMENT R. R.-VALDEZ CREEK (55 MILES TRAIL)
Connects McKinley Placer Company's plant and other adjacent prospects on Valdez Creek, a branch of the upper Susitna River. with the Government Railroad at Carlson's Roadhouse, Mile 320.

## ANNUAL REPORT ALASKA R'

Between July 1st and Oct. 31st, work, consisting of filling holes, repairi heavy growth of brush overhanging the Present condition fair.
Total expenditures $\$ 525.00$.
ROUTE 7B-FOX-OLNES $\qquad$
This road connects the towns of 1 Mile 18 and 34, respectively, on the bran Railroad known as the Happy-Chatanik: constructed in pre-railroad days and $t$ little used.

No work was done between May 1st
Work between July 1st and Oct. 31 repairing culverts and replanking one sh

Present condition fair.
Total expenditures $\$ 230.00$.

## ROUTE 7D-ESTER CREEK..

$\qquad$
This road connects the Town of $F$ on Ester Creek, one of the rich placer $c$ ing the Government Experimental Farm the Government Railroad to Nenana at M

From May 1st to June 30th, 1921, advantage during break-up by A. R. C. A bog, was graveled and general repairs a ried on by the Territorial Road Commis: ished on July 13, 1921. Nothing more wa: from dragging the road once.

A portion of this road between Miles a soil area subject to very rapid erosion it is advisable to expend a sum of appr handling the water at that time. Aside tions between May 1st and Oct. 31st, I general maintenance.

Present condition very good.
Total Territorial expenditures $\$ 2,916$.
A. R. C. expenditures $\$ 388.33$.

ROUTE 7G-FAIRBANKS-GILMORE...... (13
This, road forms an integral part of of the Richardson Highway to Circle Cit with the Town of Gilmore, near the head prominent placer district. It carries a lar the vent placer district. It carries a lar
miners.

## ALASKA KOAD COMMISSION.

Oct. 31 st, 1921, no work was done on a reconnaissance trip was made through Jose of ascertaining the most feasible
y left Carlson's Roadhouse to blaze the , the Company's holdings, a distance of -mpany had already cut the road to the as being hauled over it. Three hundred spring.

## 3.

NT R. R.-MOOSE CREEK (6 MILES $\geq$ placer mining ground on upper Moose Nenana River, with the Government Railground on Moose Creek produced $\$ 3,700$ ery short working season.
$?$ on this road between July ist and Oct. 1 Sons, $\$ 500$ being allotted for the work :t the above named firm would perform, of work. Work done on this road by the Sons was very satisfactory.
of the road is fair for light loads, not

## 1.

## TORIAL PROJECTS.

| oute W | Wagon Road | Sled <br> Road | Trail | Total Miles |
| :---: | :---: | :---: | :---: | :---: |
| ka ......................- | 11 |  |  | 11 |
| ka | 13 |  |  | 13 |
| ..................................... | 13 |  |  | 13 |
|  | ${ }_{13}^{13}$ |  |  | $1^{1 / 2}$ |
| Creek .................. | ${ }_{6}^{1 / 2}$ |  |  | ${ }_{6}^{6}$ |
| a Hot Springs... |  | 64 54 |  | 54 |
| ${ }^{1}$ Hill | - $61 / 2$ |  |  | $61 / 2$ |
|  |  |  |  | 9 |
| ircle Hot Springs | S $\begin{array}{r}9 \\ 24\end{array}$ |  |  | 24 |
| Inding-Eureka .... | - 244 |  |  | 34 |
| ishna ................... |  | 63 |  | 63 |
|  | 47 | 54 |  | 101 |
|  | 131 | 181 |  | 312 |

## $\therefore$ with Alaska Road Commission.

 ative projects.CHATANIKA........ (11 MILES WAGON ROAD)
lad and very little used at the present time, automobiles and is a part of the proposed iichardson Highway from Fairbanks to Circle
le between May 1st and June 30th, 1921.

Between July 1st and Oct. 31st, 1921, general maintenance work, consisting of filling holes, repairing culverts and cutting the heavy growth of brush overhanging the road, was done.

Present condition fair.
Total expenditures $\$ 525.00$.
ROUTE 7B—FOX-OLNES $\qquad$ .. (13 MILES WAGON ROAD)

This road connects the towns of Fox and Olnes, situated at Mile 18 and 34, respectively, on the branch line of the Government Railroad known as the Happy-Chatanika Branch. The road was constructed in pre-railroad days and the greater part of it is little used.

No work was done between May 1st and June 30th, 1921.
Work between July 1st and Oct. 31st, 1921, consisted only of repairing culverts and replanking one short bridge.

Present condition fair.
Total expenditures $\$ 230.00$.
ROUTE TD-ESTER CREEK. $\qquad$ (13 MILES WAGON ROAD)

This road connects the Town of Fairbanks with Ester City on Ester Creek, one of the rich placer creeks in early days, passing the Government Experimental Farm at Mile 6 and crossing the Government Railroad to Nenana at Mile 460.

From May 1st to June 30th, 1921, $\$ 100$ was spent to good advantage during break-up by A. R. C. Mile 3, known as the peat bog, was graveled and general repairs and maintenance was carried on by the Territorial Road Commission. This road was inished on July 13, 1921. Nothing more was done to Oct. 31st, aside from dragging the road once.

A portion of this road between Miles 7 and 13 passes through a soil area subject to very rapid erosion during spring season and it is advisable to expend a sum of approximately $\$ 100.00$ toward handling the water at that time. Aside from this work, operations between May 1st and Oct. 31st, 1922, will be confined to general maintenance.

Present condition very good.
Total Territorial expenditures $\$ 2,916.30$.
A. R. C. expenditures $\$ 388.33$.

## ROUTE 7G-FAIRBANKSGILMORE.....(13 MILES WAGON ROAD)

This road forms an integral part of the proposed extension of the Richardson Highway to Circle City, connecting Fairbanks with the Town of Gilmore, near the headwaters of Goldstream, a prominent placer district. It carries a large part of the traffic in the vicinity of Fairbanks, being used principally by farmers and miners.

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No work was rone on this route between May ist and June 30th, 1921.

Between July 1st and Oct. 31st, 1921, the entire road was worked over, 4 miles receiving a light layer of gravel and 7 miles being graded, in addition to general repair work. The post bent bridge over Garden Slough, one-quarter mile out from Fairbanks, was rebuilt. New timbers were put on the ice breakers of the Noyes Slough Bridge.

Present condition good.
Total Territorial expenditures, $\$ 3,890.90$; A. R. C. expenditures, $\$ 5.61$.

## ROUTE 7H—LITTLE ELDORADO CREEK ( $11 / 2$ MILES WAGON ROAD)

This road connects placer mining claims on Little Eldorado Creek, a tributary of Goldstream, with the Government Railroad at Little Eldorado Station, Mile 37, Happy-Chatanika Branch.
; No work was performed between May 1 st and June 30th; 1921.

Between July 1st and Oct. 31st, 1921; general repair work, including a new bridge of 16 -foot span, was done.

Present condition good.
Total expenditures $\$ 336.00$.
ROUTE 7I-GILMORE-SUMMIT. $\qquad$ (6 MILES WAGON ROAD)

This ronte forms a part of the proposed extension of the Richardson Highway and is used by automobiles, trucks and teams in going from Fairbanks to Fairbanks Creek or from Fairbanks to Chatanika. It comnects the Town of Gilmore with point on divide known as summit. where road branches, one branch going to Fairbanks Creek, the other to Chatanika.

No work was done on this route between May 1st and June 30th, 1921.

Between July 1 st and oct. 31st, 1921, the entire road was gone over and put in good condition, the grader being used where feasible and bridges and culverts repaired.

This road is in good surface condition but has some excessive grades. Because of the heavy traffic over it and the fact that it will later form a part of the Richardson Highway, approximately two miles of the road will be relocated to secure better grades.

Present condition good.
Total expenditures $\$ 2,965.32$.

ANNUAL REPORT ALASKA ROA

## ROUTE 7J-FAIRBANKS-CHENA HOT Si

 ROAD)This route connects Fairbanks with Chena River and is used by the farmers, the passenger traffic to the Springs.

No work was done between May 1st
Between July 1st and Oct. 31st the Chena River at Mile 14 was put in at a , being shared by the Territory to the ext work was done on the sled road but spent on repairing, widening, and hauli miles of road along the foot of Birch $H$ be continued to the Hot Springs.

Petitions have several times been blutf near Mile 44, where the trail nece on Chena River. The river at this point travelers have had narrow escapes from ,

Present condition of winter road is $g$
Total Territorial expenditures $\$ 1,05$ :
A. R. C. expenditures $\$ 1,215.50$.

## ROUTE $7 K$-OLNES-LIVENGOOD.

Connects Town of Olnes on the Chate ernment Railroad with Livengood Creek i This road has been practically abandoned $t$ for summer travel, in favor of the Dunb the Wilbur Creek excitement of the last and encouraging prospects were found, increased.

Between July 1st and Oct. 31st, 1921 Bridge was rebuilt and the foot bridge $0^{\circ}$ was repaired.

Present condition of road is fair.
rotal expenditures $\$ 221.25$.

## ROUTE TN-FARMERS' BIRCH HILL ( $61 / 2$

This road has been built by the Territ district along Birch Hill. It branches frol Road (Route 7G) at Mile 3, and connects Road (Route 7D) at Mile 5.

Some grading was done on this rou June 30 th, but the bulk of the work wa July 1st and Oct. 31st, 1921. Due to por the road was abandoned, a large part of Over two miles of new road to make the
this route between May ist and June

Oct. 31st, 1921, the entire road was -ing a light layer of gravel and 7 miles o general repair work. The post bent - one-quarter mile out from Fairbanks, were put on the ice breakers of the
1.
enditures, $\$ 3,890.90$; A. R. C. expendi-

DORADO CREEK ( $11 / 2$ MILES WAGON
placer mining claims on Little Eldorado Idstream, with the Government Railroad Nile 37, Happy-Chatanika Branch.
nmed between May 1 st and June 30th,
nd Oct. 31st, 1921; general repair work, f 16 -foot span, was done.
od.
:336.00.
JMMIT............... (6 MILES WAGON ROAD)
a part of the proposed extension of the is used by automobiles, trucks and teams is to Fairbanks Creek or from Fairbanks ects the Town of Gilmore with point on it, where road branches, one branch going other to Chatanika.
? on this route between May 1st and June
and Oct. 31st, 1921, the entire road was vod condition, the grader being used where id culverts repaired.
d surface condition but has some excessive ? heavy traffic over it and the fact that it of the Richardson Highway, approximately rill be relocated to secure better grades. good.
s $\$ 2,965.32$.

ANNUAL REPORT ALASKA ROAD COMMISSION.

## ROUTE 7J—FAIRBANKS-CHENA HOT SPRINGS (64 MILES SLED

 ROAD)This route connects Fairbanks with the Hot Springs up the Chena River and is used by the farmers, miners, wood-haulers, and the passenger traffic to the Springs.

No work was done between May 1st and June 30th, 1921.
Between July 1st and Oct. 31st the new bridge over Little Chena River at Mile 14 was put in at a cost of $\$ 1,650.00$, the cost being shared by the Territory to the extent of $\$ 525.00$. No other work was done on the sled road but approximately $\$ 500$ were spent on repairing, widening, and hauling gravel on the three miles of road along the foot of Birch Hill which will eventually be continued to the Hot Springs.

Petitions have several times been circulated to grade the bluff near Mile 44, where the trail necessarily takes to the ice on Chena River. The river at this point is slow in freezing and travelers have had narrow escapes from drowning.

Present condition of winter road is good.
Total Territorial expenditures $\$ 1,052.35$.
A. R. C. expenditures $\$ 1,215.50$.

ROUTE 7K-OLNES-LIVENGOOD................ (54 MILES SLED ROAD)
Connects Town of Olnes on the Chatanika Branch of the Government Railroad with Livengood Creek in the Tolovana District. This road has been practically abandoned the past few years, except for summer travel, in favor of the Dunbar-Brooks Road. During the Wilbur Creek excitement of the last year, when several new and encouraging prospects were found, the travel on this trail increased.

Between July 1st and Oct. 31st, 1921, the Washington Creek Bridge was rebuilt and the foot bridge over the Chatanika River was repaired.

Present condition of road is fair.
Total expenditures $\$ 221,25$.

## ROUTE TN-FARMERS' BIRCH HILL ( $61 / 2$ MILES WAGON ROAD)

This road has been built by the Territory through the farming district along Birch Fill. It branches from the Fairbanks-Gilmore Road (Route 7G) at Mile 3, and connects with the Fairbanks-Ester Road (Route 7D) at Mile 5.

Some grading was done on this route last season prior to June 30 th, but the bulk of the work was accomplished between July 1st and Oct. 31st, 1921. Due to poor location, one mile of the road was abandoned, a large part of it being washed out. Over two miles of new road to make the connection between the

Gilmore Road and Ester City Road, were built and an additional two miles were regraded and widened. A number of new culverts were built. Results of the work done on this route were very satisfactory.

Present condition good.
Total expenditures $\$ 4.814 .89$.
ROUTE 7S-GRAEHL BRIDGE:
This bridge is over a slough on the winter cut-off from the Fox Road into Fairbanks. All the travel from that direction crosses this bridge in winter as it saves approximately one mile on the distance into Fairbanks. It is also the only outlet for the people living in Graehl during the summer.

Minor repairs were made. This bridge requires rebuilding at an estimated cost of $\$ 1,200$.

Total expenditures $\$ 105.97$.
ROUTE 15A-CENTRAL HOUSE-CIRCLE HOT SPRINGS (9 MILES WAGON ROAD)

This is a branch road from the Circle-Miller House Road at Central House, Mile 36, to the Hot Springs.

No work was done until after June 30th, 1921. Between that date and Oct. 31 st, 1921 , general maintenance work, such as ditching, covering corduroy, and repairing culverts, was done.

Present condition fair.
Total expenditures $\$ 620.50$.

## ROUTE 30 -HOT SPRINGS LANDING-EUREKA (24 MILES WAGON ROAD)

Connects the landing on the Tanana River, two miles from Hot Springs, with mining camp of Eureka, passing through Hot Springs.

One hundred dollars was spent to protect road during spring floods, between May 1st and June 30th, 1921. During period July 1st to Oct. 31st, 1921, a new bridge was erected over Baker Creek at Mile 14. Bridge consists of one 80 -foot Howe truss span of native timber and approaches decked with four-inch planks. Cost of bridge was shared by the Territory to the extent of $\$ 1,000$; total cost approximately $\$ 6,200$.

This road has held up well for the small amount of work that has been done upon it since first built and though $\$ 20,000$ would be required to make it a good road, $\$ 2,500$ will repair the Hot Springs Slough Bridge, put in a few needed culverts and cut the brush from the road. The last item is most necessary as

## ANNUAL REPORT ALASKA R:

the underbrush has grown to such an overlaps the road in many places.

Total Territorial expenditures $\$ 1,1$
A. R. C. expenditures $\$ 5,001.72$.

## ROUTE 46A-ROOSEVELT-KANTISHN ROAD)

This road leads from Roosevelt, o Kantishna River, to the Postoffice of Ka Lacking connection with the railroad, a are brought up the Kantishna River to overland to Kantishna. The road to road.

No work was accomplished last si 1921, when a foreman was sent in to lay been cut the winter before. Five thous laid and two and one-half miles of clearin

Condition of road actually built to balance of road is very poor. Nine thou: duroy will have to be laid; also two brj and several miles brushed out. Estimat a fair wagon road is $\$ 50,000$.

Total Territorial expenditures $\$ 655$.
A. R. C. expenditures $\$ 8,964.09$.

## ROUTE 63-DUNBAR-BROOKS

Connects mining camp of Brooks in Dunbar Station at Mile 429 of the Gove a good winter trail and the best availa

No work done between May 1st and
Three bridges were put in over 1 sloughs near the Tolovana River and route were made, partly from Territoris present in good condition.

Total Territorial expenditures $\$ 1,778$
A. R. C. expenditures $\$ 366.50$.

ROUTE 46E-KUSKOKWIM RECONNAIS
During the open season the Enginee investigation of possible summer routes $f$ road to tine Kuskokwim. The route fo Riley Creek through Mt. McKinley Park district to Roosevelt, at the head of nar River. After reaching Roosevelt the rour Kantishna River across Lake Minchumin. head of the north fork of the Kuskokwin

Road, were built and an additional idened. A number of new culverts $k$ done on this ronte were very
ugh on the winter cut-off from the he travel from that direction crosses ves approximately one mile on the also the only outlet for the people nmer.

This bridge requires rebuilding at

E-CIRCLE HOT SPRINGS (9 MILES
om the Circle-Miller House Road at e Hot Springs.
1 after June 30th, 1921. Between general maintenance work, such as d repairing culverts, was done.

LANDING-EUREKA (24 MILES
the Tanana River, two miles from up of Eureka, passing through Hot
spent to protect road during spring June 30th, 1921. During period July ridge was erected over Baker Creek one 80 -foot Howe truss span of nacked with four-inch planks. Cost of ritory to the extent of $\$ 1,000$; total
vell for the small amount of work ince first built and though $\$ 20,000$ a good road, $\$ 2,500$ will repair the ut in a few needed culverts and cut The last item is most necessary as
the underbrush has grown to such an extent that it completely overlaps the road in many places.

Total Territorial expenditures $\$ 1,147.36$.
A. R. C. expenditures $\$ 5,001.72$.

ROUTE 46A-ROOSEVELT-KANTISHNA (34 MILES WAGON ROAD)

This road leads from Roosevelt, on the upper waters of the Kantishna River, to the Postoffice of Kantishna, the mining center. Lacking connection with the railroad, all supplies for the district are brought up the Kantishna River to Roosevelt and then hauled overland to Kantishna. The road to date is largely a winter road.

No work was accomplished last season until after July 1st, 1921, when a foreman was sent in to lay some corduroy which had been cut the winter before. Five thousand feet of corduroy were laid and two and one-half miles of clearing done.

Condition of road actually built to date is excellent, but the balance of road is very poor. Nine thousand feet of additional corduroy will have to be laid; also two bridges will have to be built and several miles brushed out. Estimated cost to make this route a fair wagon road is $\$ 50,000$.

Total Territorial expenditures $\$ 655.03$.
A. R. C. expenditures $\$ 8,964.09$.

ROUTE 63-DUNBAR-BROOKS..................... (63 MILES SLED ROAD)
Connects mining camp of Brooks in the Tolovana District with Dunbar Station at Mile 429 of the Government Railroad. This is a good winter trail and the best available route to Brooks.

No work done between May 1st and Oct. 31st, 1921.
Three bridges were put in over Washington Creek and two sloughs near the Tolovana River and general repairs over the route were made, partly from Territorial funds. The road is at present in good condition.

Total Territorial expenditures $\$ 1,778.38$.
A. R. C. expenditures $\$ 366.50$.

## ROUTE 46E-KUSKOKWIM RECONNAISSANCE:

During the open season the Engineer Officer made a thorough investigation of possible summer routes from the Government Railroad to the Kuskokwim. The route followed by him was from Riley Creek through Mt. McKinley Park and the Kantishna mining nistrict to Roosevelt, at the head of navigation on the Kantishna River. After reaching Roosevelt the route followed was along the İantishna River across Lake Minchumina and the portage to the head of the north fork of the Kuskokwim. The north fork of the

ANNUAL REPORT ALASKA ROAI

## KUSKOKWIM DISTR

W. W. Lukens, Asst. Su

This district was organized last workin ant superintendent sent to Tacotna, via the the first boat leaving Seattle in the spring. developments at Nixons Forks, northeast of successful dredging operations southwest of in this hitherto inaccessible region has $k$ Members of the Board, last year, made recom out the lengths of the Yukon and Kuskokwis portages from the Kantishna to the north 1 mina, from Ruby to Ophir via Long-PoormanTacotna, and from Kalchagamut to Russian

Many years ago, during the Iditarod constructed the Rainy Pass Trail from Se branches to Ruby and Iditarod. It has sinc tended the system of winter trails in this $r$ Iditarod. Some short roads were constructer Flat, an excellent road was built from Rubs three years ago, construction of the Ophir-T ing the upper Innoko with the Tacotna River,

A start was made this year in exten. Bethel, the ocean port at the head of the estua Should this country continue to develop, as tem will be extended to Cape Newenham a developments on the Alaska Peninsula.

There are 20 sub-projects in this distri ${ }^{n}$ expenditure 20 sub-projects in this distri sumed charge of the work, the present Boa now little of record concerning conditions in trict. made extensive reconnaissances through, all oid has been able to initiate a system tensions. routes and has already adopted sevel

Kuskokwim was followed to the main forks of the Kuskokwim and thence to McGrath.

In addition to this, Superintendent Sterling last winter made i winter reconnaissance, starting at Lignite on the Government Failroad and following the route Lignite-Glacier-Bartlett's CabinTelida Village. The reconnaissance was not extended beyond Telida Village but the winter and summer conditions along the east fork of the Kuskokwim from the main forks to Telida Village are well known.

As a result of these two winter and summer reconmaissances, with the numerous shorter ones made by the Engineer Officer and employees of this Board through the last two years, the topography and conditions of travel, both winter and summer, through the area west of the Government Railroad, including the northern portion of Mt. McKinley Park, the Kantishna mining district, and possible routes to the valley of the Kuskokwim are well known.

Total expenditures $\$ 831.75$.
DISTRIBUTION OF EXPENDITURES
Unit Cost Dollars per Mile

| ype | Miles* | Expenditures | Dollars per Mile |
| :---: | :---: | :---: | :---: |
| Sled Road ......................................... 527 |  |  |  |
|  |  |  |  |
|  |  | \$157,913.35 | \$86.00 |

Totals $\qquad$ 840
$\$ 157,913.35$
*Includes routes maintained during fiscal year only
Non-cooperative Territorial projects not included.

0 the main forks of the Kuskokwim and
uperintendent Sterling last winter made starting at Lignite on the Government te route Lignite-Glacier-Bartlett's Cabin:aissance was not extended beyond Telida I summer conditions along the east fork te main forks to Telida Village are well
two winter and summer reconnaissances, $3 r^{\circ}$ ones made by the Engineer Officer ard through the last two years, the topotravel, both winter and summer, through zrnment Railroad, including the northern Park, the Kantishna mining district, and ley of the Kuskokwim are well known. 31.75 .

## -ION OF EXPENDITURES

Unit Cost
Miles* Expenditures Dollarsper Mile
. 308
. 527
... 1005
$. . \overrightarrow{840} \quad \$ 157,913.35$
ed during fiscal year only.
ial projects not included.

## KUSKOKWIM DISTRICT.

W. W. Lukens, Asst. Supt.

This district was organized last working season and an assistant superintendent sent to Tacotna, via the Kuskokwim River, on the first boat leaving Seattle in the spring. Due to the lode mining developments at Nixons Forks, northeast of McGrath, and to the successful dredging operations southwest of McGrath, prospecting in this hitherto inaccessible region has been much stimulated. Members of the Board, last year, made reconnaissance trips throughout the lengths of the Yukon and Kuskokwim Rivers, crossing the portages from the Kantishna to the north fork via Lake Minchumina, from Ruby to Ophir via Long-Poorman-Cripple, from Ophir to Tacotna, and from Kalchagamut to Russian Mission.

Many years ago, during the Iditarod stampede, the Board constructed the Rainy Pass Trail from Seward to Kaltag, with branches to Ruby and Iditarod. It has since maintained and extended the system of winter trails in this region as far south as Iditarod. Some short roads were constructed around Iditarod and Flat, an excellent road was built from Ruby to Long Creek, and three years ago, construction of the Ophir-Tacotna Road, connecting the upper Innoko with the Tacotna River, was begun.

A start was made this year in extending this system toBethel, the ocean port at the head of the estuary of the Kuskokwim. Should this country continue to develop, as seens likely, the system will be extended to Cape Newenhan and across to the oil developments on the Alaska Peninsula.

There are 20 sub-projects in this district, upon 9 of which no expenditures were made during the fiscal year. When it assumed charge of the work, the present Board was able to find very little of record concerning conditions in this district. It has now made extensive reconnaissances throughout most of the district. It has been able to initiate a systematic rehabilitation of all old routes and has already adopted several much needed ex-

| $\begin{aligned} & \text { Sub } \\ & \text { Project } \\ & \text { No. } \end{aligned}$ | Noume of | Route | Vagon Road | sled Road | Trail | Tolal <br> Miles |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 A * | Lewis Landi | -Dishkaket |  |  | 108 | 108 |
| $17 \mathrm{~S}^{*}$ | Nulato-Dishk | ket ............ |  |  | 96 | 94 |
| 20 C | Rainy Pass- | acotna |  |  | 130 | 1311 |
| $201{ }^{2}$ | Tacotra-Kal |  |  |  | 145 | 115 |
| 32 A | Tacotna-Flat | Creek | 8 |  |  | 8 |
| 32 B * | Iditarod-Flat | Creck .... | . 8 |  | 96 | 9 |
| ${ }_{32 \mathrm{D}}{ }^{\text {a }}$ | Flat-Crooked | Creek |  |  | 62 | 63 |
| 33 A * | Otter Creek | owpath |  |  | 22 | 22 |
| $33 \mathrm{~B}^{*}$ | Summit-Ott | Creek | 6 |  |  | ${ }^{6}$ |
| $34^{*}$ | lditarod-Disl | aket ........ |  | 30 | 68 | 98 |
| 38A | Ruby-Long | reek .... | $3)$ |  |  | 319 |
| 38 B | Long Creek | ripple City |  |  | $6{ }^{6}$ | 613 |
| 38 C | Ophir-Crippl | ................. |  |  | 5 | $24^{1} 2$ |
| 38 D | Tacotna-Oph |  | ${ }_{29}^{24} 9$ |  |  | 29 |
| 38 E | Long-Poorm |  |  |  | 125 | 125 |
| 64 | Cripple-Lew | Landing |  |  | 611 | $6{ }^{11}$ |
| 92 A | Bethel-Quin | gak ........ |  |  | 90 | 911 |
| 92 B | Bethel-Akial |  |  |  | 26 | 36 |
| Totals |  |  | 97\% | 30 | 1213 | 13443.2 |
| \% No expenditures during the fiscal vear. No work was done on these routes during the period or curtailed appropriations resulting from the |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| ROUTE 20C-RAINY PASS-TACOTNA.............. (130 |  |  |  |  |  |  |

Minor repairs only. Complete rehabilitation to be undertaken mext winter.

No expenditures.
ROUTE 32A-TACOTNA-FLAT CREEK $\qquad$ (87 MILES TRAIL)

This is the summer route from the Iditarod to Ophir and MeGrath.

An examination was made and contract let for shelter cabins and horse barns.

Expenditure $\$ 42.50$.
ROUTE 32D-FLAT-CROOKED CREEK $\qquad$ (62 MILES TRAIL)

A reconnaissance was made to determine the best summer and winter routes for trails to connect the Iditarod District with the Fuskokwim River.

Expenditure $\$ 130.00$.
ROUTE 38A-RUBY-LONG CREEK....... (30 MILES WAGON ROAD)
This is an excellent road connecting Ruby with the working: on Long Creek. Its extension to Poorman is contemplated. General maintenance work was performed and damagp " sulting from the spring break-up was repaired.

Expenditure $\$ 4,659.48$.

ANNUAL REPORT ALASKA ROAD
ROUTE 38B-LONG CREEK-CRIPPLE CITY.
This is the winter mail trail from Ruby General repair of bridges; reconnaissan. Expenditure \$706.94.

ROUTE 38C-OPHIR-CRIPPLE.
This is the continuation of the winter noko River to Ophir.

Winter and summer reconnaissance.
Expenditure $\$ 335.25$.
ROUTE 38D-TACOTNA-OPHIR $\qquad$ ( $241 / 2 \mathrm{MI}$
Every effort was made for the vigorous unon this road through the last season to re increased dredging operations on the upper $]$ ant Superintendent Lukens went into the proj and had transported with him a liberal su: equipment necessary for the work. Previous $t$ gone in over the snow from Fairbanks for preliminary work and arianging for the seaso excellent progress was made upon the road. marizes the work accomplished:

Road graded $\qquad$
Right-of-way cleared and grubbed
Corduroy placed $\qquad$
Culverts built $\qquad$
Bridges, 20 -foot span
Bridge, 34 -foot span
Trestle bridge, 54 feet long
There remains, for the completion of this bridge across Gaines Creek and five miles of with the relocation and rehabilitation of five : cent to Ophir. Every effort is being made, sin to expedite the completion of this important 1
a producing mining district.
Expenditures: Territory of Alaska, $\$ 3,4$
Commission, $\$ 38,222.80$; total, $\$ 41,292.42$.
ROUTE 38E-LONG-POORMAN $\qquad$ (29 MIL
This is a very poor summer road, follow ter mail trail, Route 38 B . It will require reloc: ${ }^{\text {tr }}$ part of its length. Reconnaissance has beet Was let for timbers for a bridge across the : bridge will he erected next fiscal year.

Expenditures $\$ 3,557.27$.
'ORT ALASKA ROAD COMMISSION.

wing the fiscal year. No work was done on these wing of curtailed appropriations resulting from the being investigated.

## PASS-TACOTNA

$\qquad$ (130 MILES TRAIL)
nly. Complete rehabilitation to be undertaken

「NA-FLAT CREEK. $\qquad$ (87 MILES TRAIL) mmer route from the Iditarod to Ophir and was made and contract let for shelter cabins $\therefore .50$.

CROOKED CREEK $\qquad$ (62 MILES TRAIL)
e was made to determine the best summer and ails to connect the Iditarod District with the
30.00 .
-LONG CREEK....... (30 MILES WAGON ROAD)
sllent road connecting Ruby with the workings extension to Poorman is contemplated.
nance work was performed and damage it: ing break-up was repaired.

1,659.48.

## ROUTE 38B-LONG CREEK-CRIPPLE CITY...... ( 60 MILES TRAIL)

This is the winter mail trail from Ruby to the South. General repair of bridges; reconnaissance of relocation. Expenditure $\$ 706.94$

ROUTE 38C-OPHIR-CRIPPLE $\qquad$ .. (50 MILES TRAIL)
This is the continuation of the winter mail trail up the Innoko River to Ophir.

Winter and summer reconnaissance
Expenditure $\$ 335.25$

## ROUTE 38D-TACOTNA-OPHIR

$\qquad$ (241/2 MILES WAGON ROAD)
Every effort was made for the vigorous prosecution of work upon this road through the last season to respond to the greatly increased dredging operations on the upper Innoko River. Assistant Superintendent Lukens went into the project by way of Bethel and had transported with him a liberal supply of supplies and equipment necessary for the work. Previous to this, a foreman had gone in over the snow from Fairbanks for the purpose of doing preliminary work and arranging for the season. As a result, very excellent progress was made upon the road. The following summarizes the work accomplished:

| Road graded |  |
| :---: | :---: |
| Right-of-way cleared and grubbed ........................... 4.75 miles |  |
| Corduroy placed | 10.00 miles |
| Culverts built | 0.70 miles |
| Bridges, 20 -foot span | 21 |
| Bridge, 34-foot span | 2 |
| Trestle bridge, 54 feet long |  |
|  | . 1 |

There remains, for the completion of this road, one important bridge across Gaines Creek and five miles of location and grading with the relocation and rehabilitation of five additional miles adjacent to Ophir. Every effort is being made, similarly to last season, to expedite the completion of this important portage road through a producing mining district

Expenditures: Territory of Alaska, $\$ 3,069.62$; Alaska Road Commission, $\$ 38,222.80$; total, $\$ 41,292.42$

## ROUTE 38E-LONG-POORMAN

(29 MILES WAGON ROAD)
This is a very poor summer road, following in part the winter mail trail, Route 38 B . It will require relocating over the greater part of its length. Reconnaissance has been made and contract was let for timbers for a bridge across the Solatna River. This bridge will be erected next fiscal year

Expenditures $\$ 3,557.27$.
$\qquad$
A reconnaissance was made of a summer trail from Poorman to Ophir. During the present working season, it is planned to blaze out the route, erect signs at confusing points, build a few bridges, and erect shelter cabins.

No expenditures.

## ROUTE 64-CRIPPLE-LEWIS LANDING.

$\qquad$ (60 MILES TRAIL)
This winter trail was flagged across several open stretches. Expenditures $\$ 100.00$.

ROUTE 92A-BETHEL-QUINHAGAK $\qquad$ (90 MILES TRAIL)

This is a new project. The mail trail was permanently tripoded, beacons were set upon opposite shores of all lakes, and temporary stakes were set on the ice. The work was done by contract and consisted of the erection of 89 beacons, 296 tripods, and 10 stakes, the cutting out of one-fourth mile of brush, and the cutting down of two approaches through high banks. The job has bepn inspected, and contractor paid, but voucher has not yet reached the account.

Expenditure of $\$ 11.50$ was for inspection.
ROUTE 92B-AKIAK-BETHEL................................... (26 MILES TRAIL)
This is a new project. The mail trail was permanently marked. The work was done by contract and consisted of the erection of 22 beacons, is tripods, the cutting down of 13 approaches to portages across bends in the Kuskokwim. River, and the clearing of 6 miles of brush 12 feet wide. The old trail was straightened and shortened. The job has been inspected and paid for.

Expenditures: Territory of Alaska, $\$ 500.00$; Alaska Road Commission, $\$ 283.48$; total, $\$ 783.48$.

## SHELTER CABINS.

Contract was let for three shelter cabins and two horse barns on the Tacotna-Flat summer trail. The cabins were erected at Brush Creek, Fourth of July Creek and Lincoln Creek; the barns at Brush Creek and Fourth of July Creek.

The work has been inspected but the contractor has not bee ${ }^{\mathfrak{l}}$ paid. Price bid was $\$ 1,500$ for the job.

## DISTRIBUTION OF EXPENDITURES.

| True | Miles* | Expenditures | Unit Cost Dollars per Mile |
| :---: | :---: | :---: | :---: |
| Wagon Road Trail | $565$ |  |  |
| Totals | 6481/2 | \$51.618.84 | \$79.60 |

ANNUAL REPORT ALASKA ROAD

EXAMINATIONS AND SUF
The Engineer Officer made a winter team down the Yukon River to Ruby, then Grath, Nixons Forks, and back to the Go Rainy Pass. He made a summer reconnais foot from Lake Minchumina down the Kuskoli and then to Ophir, Cripple, Poorman, and $R_{1}$ ed down the Yukon River to St. Michael.

The President of the Board made a $s$ by pack train, poling boat, launch and or Ophir, Tacotna, McGrath, down the Kuskokn the Yukon-Kuskokwim Portage to Russian M the Yukon to St. Michael.

A great deal of information has thu: cerning this hitherto little-known section of prehensive program of road and trail develol up.

NOME DISTRICT.

Chas. D. Jones, Superintendent.
Tine peculiarly unfavorable soil conditions prevailing and the absence of timber suitable for corduroy add both to the cost of original construction and to the cost of maintenance of roads and trails in this district.

The first boat from Seattle reaches Nome late in June, and the last boat leaves early in November. All supplies for the entire year must be delivered upon the Seward Peninsula between these dates. During the winter, mail is received by dog team from Dunbar, on the Government Railroad, 659 miles from Nome.

Nome is of especial importance as its location on the exposed shore of Bering Sea makes it the first port of call open to navigation in the spring and the last to close in the fall of all ports on the Seward Peninsula. While the bulk of the freight to Seward Peninsular points is delivered in mid-summer through the nearest port, for the great majority of personnel wintering outside, Nome will always remain the point of debarkation in the spring and embarkation in the fall, at the beginning and close of the season, respectively. From Nome or intermediate points on the through mail trail from Fort Gibbon and Dunbar, mail trails radiate to all inhabited points in Western Alaska, as far north as Point Barrow and south to Cape Newenham.

The creeks in the immediate vicinity of Nome are now well supplied by a system of about 60 miles of wagon and auto-truck roads. There are also local systems in the vicinity of Davidson's Landing, Deering, Candle, Council, and Dime Landing. The principal through summer road extends from Nome to Council, a distance of 82 miles. The Seward Peninsular Railway, which extends from Nome to Shelton, a distance of 87 miles, and which ceased operations as a common carrier some ten years ago, is still maintained as a tram line using dogs as motive power.

Two types of winter mail trails are maintained in this district: first, the permanent trails which follow a definite location and are permanently tripoded or otherwise marked across the open tundra; and, second, the temporary flagged trails; which cut across lakes and arms of the sea, or represent short-cuts and alternative routes dependent upon winter snow drifts, storms, or other seasonal climatic conditions, and which are restaked in whole or in part each winter, after conditions become somewhat stabilized. Upon the open tundra where there are no distinguishing landmarks, and during snow-storms, the traveler is absolutely depend

ANNUAL REPORT ALASKA ROAD
ent upon working his way from stake to occasionally been found frozen to death $v$ shelter.

There are 61 sub-projects in this distr. no expenditures were made during the year. was done but the vouchers have not yet bee: was handled upon a cooperative basis, all funds being added to funds of the Board to the entire system of roads and trails. No heretofore been made of the distribution of district nor have definite sub-projects bef tained. The small available funds, year by $y$ to meet emergencies. Much work is in isolate bills have been as much as two years in shov determination in advance of the work to $b t$ inspection after completion have been entire reasonable cost. The superintendent of the $I$ therefore, in many cases to depend upon ma eral or Territorial officials, and local mercha! contracts and the supervision of the work. restigations, the Board has picked up some arl which some expenditures have been made ir the Territory or itself, and has definitely adol projects.

SUMMARY OF ROADS.

| $\begin{gathered} \text { Sub } \\ \text { Project } \\ \text { No. } \end{gathered}$ | Name of Route | Wagon |
| :---: | :---: | :---: |
| $\varepsilon_{\delta}^{\delta}$ | Nome-Council |  |
| 88 | Bonanza Ferry | ${ }^{\text {¢ }}$ |
| \&C | Safety Ferry |  |
| 8 D | Council Ferry |  |
| ${ }_{8}^{8 \mathrm{E}} \mathrm{8} \%$ | Mencil-Ophir Creek Road ......... | 12 |
| $8 \mathrm{~g}:$ | Warm Creek-Elkhorn Trail |  |
| §H | Bear Creek Trolley |  |
| 81 | Husa De Paga Road | $2{ }^{26}$ |
| ¢J\% | Shovel Creek ........................... | 5 |
| 13 A | Nome-Bessiek |  |
| 13 C | Bessie-Banner | 31\% |
| $13{ }^{*}$ | Bessie-Little Creek ....................... | 11/ |
| ${ }_{3}^{3} \mathrm{E}$ \% | ${ }_{\text {Dry }}$ Brsie-Dry Creek | 114 |
| ${ }_{3} \mathrm{SO}^{\text {a }}$ | Nome-osborne |  |
| 13\% | Grass Gulch |  |
| 131 | Nomer Creek | 11/2 |
| 13 F | Wonder-Flat Ereek |  |
| 18 | Bessie-Buster Creek ........ |  |
| 184 | Kaltag-Solomon | 12 |
| 18 B | Bonanza-Kotzebue |  |
| 5, | Unalan-Council |  |
| 25.8 | Cripple River Michael . |  |
| 5 CC | Pemmy River ......................... |  |
| ${ }_{20}^{50}$ | Nome Wireless ..... | $1{ }^{1 / 2}$ |
|  | Mouth of Center | $2_{0}^{1 / 2}$ |

## OME DISTRICT.

## D. Jones, Superintendent.

avorable soil conditions prevailing and the tble for corduroy add both to the cost of $d$ to the cost of maintenance of roads and
m Seattle reaches Nome late in June, and ly in November. All supplies for the entire upon the Seward Peninsula between these er, mail is received by dog team from DunRailroad, 659 miles from Nome.
a importance as its location on the exposed akes it the first port of call open to naviI the last to close in the fall of all ports on

While the bulk of the freight to Seward slivered in mid-summer through the nearest jority of personnel wintering outside, Nome
point of debarkation in the spring and em$t$ the beginning and close of the season, rene or intermediate points on the through ibbon and Dunbar, mail trails radiate to all stern Alaska, as far north as Point Barrow venham.
e immediate vicinity of Nome are now well of about 60 miles of wagon and auto-truck , local systems in the vicinity of Davidson's dle, Council, and Dime Landing. The princiroad extends from Nome to Council, a disre Seward Peninsular Railway, which extends a, a distance of 87 miles, and which ceased on carrier some ten years ago, is still mainusing dogs as motive power.
inter mail trails are maintained in this disanent trails which follow a definite location tripoded or otherwise marked across the ond, the temporary flagged trails, which cut ; of the sea, or represent short-cuts and aludent upon winter snow drifts, storms, or - conditions, and which are restaked in whole $\therefore$ after conditions become somewhat stabilized. Ira where there are no distinguishing land-low-storms, the traveler is absolutely depend
ent upon working his way from stake to stake. Travelers have occasionally been found frozen to death within a few yards of shelter.

There are 61 sub-projects in this district, upon 20 of which no expenditures were made during the year. In several cases work was done but the vouchers have not yet been received. All work was handled upon a cooperative basis, all available Territorial funds being added to funds of the Board to maintain and improve the entire system of roads and trails. No accurate reports have heretofore been made of the distribution of expenditures in this district nor have definite sub-projects been consistently maintained. The small available funds, year by year, have been used to meet emergencies. Much work is in isolated sections from which bills have been as much as two years in showing up. The definite determination in advance of the work to be done and a prompt inspection after completion have been entirely impossible at any reasonable cost. The superintendent of the Board has been forced therefore, in many cases to depend upon mail carriers, other Federal or Territorial officials, and local merchants, for the letting of contracts and the supervision of the work. As a result of its inrestigations, the Board has picked up some additional mileage upon which some expenditures have been made in the past, either by the Territory or itself, and has definitely adopted• several new subprojects.

## SUMMARY OF ROADS.

| $\begin{aligned} & \text { Sub } \\ & \text { Project } \\ & \text { No. } \end{aligned}$ | Name of Route | Wagon Road | Sled Road | Trail | Total Miles |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | Nome-Council | 57 |  | 25 | 82 |
| 8.4 | Bonanza Ferry ............................ |  |  |  |  |
| 8B | Safety Ferry ............................. |  |  |  |  |
| 8 C | Council Ferry .......................... |  |  |  |  |
| SD | Council-Ophir Creek Road ......... | 12 |  |  | 12 |
| $\stackrel{8 \mathrm{E}^{*}}{ }$ | Melsing Creek Road ............... | - 4 |  |  | 11 |
| $8 \mathrm{~F}^{*}$ | Warm Creek-Elkhorn Trail ....... |  |  | 11 | 11 |
| $8{ }_{8}^{8 \mathrm{C}^{*}}$ | Bear Creek Trolley .................. |  |  |  |  |
| ${ }_{8}^{8 H}$ |  | 20 |  |  | 20 |
| $85^{*}$ | Shovel Creek ................................. | 5 |  |  | 5 |
| 13 A | Nome-Bessie | $31 / 2$ |  |  | $31 / 2$ |
| 13 B | Bessie-Banner | $31 / 2$ |  |  | $31 / 2$ |
| 13 C | Bessie-Little Creek ..................... | 11/4 |  |  | $11 /$ |
| $13 \mathrm{D}^{*}$ | Bessie-Dry Creek | $11 / 4$ |  |  | $11 / 4$ |
| $13 \mathrm{E}^{*}$ | Dry Creek-Newton ..................... | 1/2 |  |  | 1/2 |
| 13 F | Nome-Osborne | 8 |  |  |  |
| 13G** | Grass Gulch | - |  |  |  |
| 13H* | Center Creek | $1^{11}{ }^{1}$ |  |  | $11 / 2$ |
| 13I | Nome River Extension ................ | , |  |  |  |
| 135* | Wonder-Flat Creek ..................... |  |  |  |  |
| 13 K | Bessie-Buster ................................. | $7^{1 / 2}$ |  |  | $7^{1 / 2}$ |
| 18 | Kaltag-Solomon ............................ |  |  | 2481/2 | $2481 / 2$ |
| 18.4 | Bonanza-Kotzebue ..................... |  |  | 240 | 240 |
| 18 B | Golovin-Council |  |  | 35 | 35 |
| 21 | Unalakleet-St. Michael .............. |  |  | 60 | 60 |
| 25.4 | Cripple River .............................. |  |  |  |  |
| 25 B | Penny River ................................. | $11 /$ |  |  | $11 / 2$ |
| ${ }^{25 \mathrm{C}}$ | Nome Wireless ............................ |  |  |  | ${ }^{1 / 2}$ |
| $\stackrel{\square}{5}$ | Mcuth of Center Submarine Paystreak | 2 |  |  | $\stackrel{3}{3}$ |


| $\begin{aligned} & \text { Sub } \\ & \text { Project } \\ & \text { No. } \end{aligned}$ | Name of Route | Wagon | Sled Road | Trail | Total Miles |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 25 F | Anvil Glacier | 3 |  |  | 3 |
| 25 G | Snake River Extension | 3 |  |  | 3 |
| ${ }^{25} \mathrm{H}^{*}$ | Otter Creek ................................. | 1\% |  |  | $11 / 1$ |
| 251 | Sinrock Ferry |  |  |  |  |
| 26 | Candle-Candle Creek | 6 |  |  | 6 |
| 26 A | Kugruk River Approach ............ | 1/4 |  |  | 1/4 |
| 27 | Deering-Immachuk ...................... | 25 |  |  |  |
| $28^{*}$ | Dahl Creek-Candle Trail .......... |  |  | 140 | 140 |
| 28A | Nome-Taylor |  |  | 135 | 135 |
| 37 | Topkok-Candle Winter Trail ...... |  |  | 154 | 154 |
| 41 | Kiana-Klery Creek .................... | 1 |  | 11 | 12 |
| 41A** | Kotzebue-Shungnak .................... |  |  | 200 | 200 |
| 418 ${ }^{\text {* }}$ | Kotzebue-Point Barrow .............. |  |  | 500 | 500 |
| 42 | St. Michaels-Kotlik Trail ........... |  |  | $7{ }^{(1)}$ | 70 |
| 49 | Davidson's Landing-Taylor ....... | 24 | 16 |  | 411 |
| 62 | Dime Creek Corduroy | 9 |  |  | 9 |
| $67^{\circ}$ | Nome-Teller ............................ |  |  | 80 | 80 |
| 67A | Teller-Lost River ....... |  |  | 21 | 21 |
| 678* | Teller-Bluestone ......................... |  |  | 18 | 18 |
| $67 \mathrm{C}^{*}$ | Teller-Mary's Igloo ..................... |  |  | 40 | 40 |
| 68 | Flagging Trails ........................... |  |  | 536 | 536 |
| 73 | Marshall Road .............................. | 41/4 |  |  | $41 / 4$ |
| 73 A | Kotlik-Marshall ....-...................... |  |  | 190 | 1911 |
| 738 | Stuyahok .................................... |  | 11 |  | 11 |
| 75 | Shelton Ferries ........................... |  |  |  |  |
| ${ }_{77} \mathrm{C}^{*}$ | Trolleys ......................................... |  |  |  |  |
| 77 B 77 A | Bridges |  |  |  |  |
| 89 |  |  |  |  |  |
|  | Nome - shelton-seewalik (reco |  |  |  |  |
| 89A* | Seward Peninsular Railway ...... | 87 |  |  | 87 |
| No | Totals ................................ | 322 | 27 | $27141 / 2$ | 306312 |
| ROUTE | 8-NOME-COUNCIL.... (57 MILE | ES ROA | , 25 | ILES | RAIL) |

From Nome this road follows the coast to Bonanza, Mile 32, then along the Solomon River to East Fork, Mile 49. It then follows the bed of the East Fork for a distance of about ten miles to the divide and crosses over the Skookum Divide, passing the head of Skookum Creek into the head waters of Fox River, a distance of six miles. Thence down Fox River a distance of twelve miles, following the creek bed, to the end of the Council corduroy which it follows to Council, a distance of five miles.

There are three ferries crossed en route and one trolley, all maintained by the Alaska Road Commission.

Total expenditures, prior to June 30, 1921, was for snow shoveling at bridges, clearing culverts, repairs due to break-up; also overhead expense for the purchase of supplies and equipment for season's work. 'The work after July 1, 1921. on this route was confined mostiy between Nome and Bonanza. Between Nome and Fort Davis, Mile 3, one culvert was replaced and two small bridges repaired. Between Fort Davis and Hastings Creek, Mile $63 / 4$, three road tenders were employed at different times during the season. All the culverts were cleaned, ruts in the road leveled and filled and holes in the road patched and all seasonal damage, including a large washout at Cunningham Creek, repaired. From Hastings to Cape Nome, Mile

14, the heaviest work was done. For a this section there is a bad piece of $t$ gravel surfacing keeps settling. About ol of willow brush was laid, covered with ter mile was surfaced heavily with gra. was heavily graveled at the twelve mile divided on each side of it. At Hastings hundred feet long was made, six hundr gravel being hauled at a cost of one $d$, yard. The average haul was about one thr twenty-two by sixteen were constructed four by sixteen, the labor cost for the bri grading and bridge work was done to $n$ Hastings at all times as during any southt it up so that it is impossible to cross.

At Miles $121 / 2-14$, around Camp Nom cleaned off and two overhanging pieces s cleaned. The ditch was cleaned for the thousand feet of road between Miles 131 , broken rock and material from alongsid. 14 to Bonanza the road is over a sandsi grass and heavy sod. In other spots a $h$ thrown up in the storm of 1913 made trave this section the caterpillar and a crew ployed. Two miles of grading, one-half mi and one and one-half miles of corduroyin: constructed and general repair work dol Were graded and rolled.

From Solomon to East Fork one mi repairing for twelve days. Two bridges number of bad holes patched and filled a ditch cleaned.

No work was done between East Fork
Expenditures: Territory of Alaska, Commission, $\$ 7,230.92$; total, $\$ 22,556.79$.

## ROUTE 8A-BONANZA FERRY:

This is a ferry across the mouth of 32 , a distance of about one hundred and 1 Total expenditure of $\$ 136.00$ was for material for repairs and upkeep. Territor aska Road Commission, $\$ 76.00$.

## ROUTE 8B-SAFETY FERRY:

This ferry crosses the opening of the 22, a distance of twelve hundred fer


## ICIL.... (57 MILES ROAD, 25 MILES TRAIL)

oad follows the coast to Bonanza, Mile 32, 1 River to East Fork, Mile 49. It then folast Fork for a distance of about ten miles ises over the Skookum Divide, passing the $k$ into the head waters of Fox River, a disaence down Fox River a distance of twelve eek bed, to the end of the Council corduroy uncil, a distance of five miles.
terries crossed en route and one trolley, all ska Road Commission.
es; prior to June 30, 1921, was ior ridges, clearing culverts, repairs due to lead expense for the purchase of supfor season's work. The work atter his route was confined mostly between Between Nome and Fort Davis, Mile 3, one and two small bridges repaired. Between igs Creek, Mile 63/4, three road tenders were times during the season. All the culverts the road leveled and filled and holes in the seasonal damage, including a large washout at epaired. From Hastings to Cape Nome, Mile

14, the heaviest work was done. For a mile and threequarters of this section there is a bad piece of tundra through which the gravel surfacing keeps settling. About one-half mile, Miles 10-10 $1 / 2$, of willow brush was laid, covered with gravel and the next quarter mile was surfaced heavily with gravel. About one-half mile was heavily graveled at the twelve mile post, being about equally divided on each side of it. At Hastings Creek a fill about nine hundred feet long was made, six hundred and twelve yards of gravel being hauled at a cost of one dollar and fifty cents per yard. The average haul was about one thousand feet. Two bridges twenty-two by sixteen were constructed and one culvert four by four by sixteen, the labor cost for the bridges being $\$ 240.00$. This grading and bridge work was done to make it possible to cross Hastings at all times as during any southerly storms the sea backs it up so that it is impossible to cross.

At Miles $121 / 2-14$, around Camp Nome, three bad slides were cleaned off and two overhanging pieces shot down and the slope cleaned. The ditch was cleaned for the entire distance and one thousand feet of road between Miles $131 / 2-14$ were surfaced with broken rock and material from alongside the road. From Mile 14 to Bonanza the road is over a sandspit covered in spots with grass and heavy sod. In other spots a heavy sandbar which was thrown up in the storm of 1913 made travel almost impossible. On this section the caterpillar and a crew of seven men were employed. Two miles of grading, one-half mile of willow corduroying and one and one-half miles of corduroying was done; one bridge constructed and general repair work done. Two miles of road were graded and rolled.

From Solomon to East Fork one man worked patching and repairing for twelve days. Two bridges were repaired and a number of bad holes patched and filled and one thousand feet of ditch cleaned.

No work was done between East Fork and Council.
Expenditures: Territory of Alaska, $\$ 15,325.87$; Alaska Road Commission, $\$ 7,230.92$; total, $\$ 22,556.79$.

## ROUTE 8A-BONANZA FERRY:

This is a ferry across the mouth of the Bonanza River, Mile 32, a distance of about one hundred and fifty feet.

Total expenditure of $\$ 136.00$ was for salary of ferryman and material for repairs and upkeep. Territory of Alaska, $\$ 60.00$; Alaska Road Commission, $\$ 76.00$.

## ROUTE 8B-SAFETY FERRY:

This ferry crosses the opening of the Bering Sea at Safety, Mile 22, a distance of twelve hundred feet.

Total expenditure of $\$ 386.00$ was for salary of ferryman, a new cable, and material for upkeep and repairs. Territory of Alaska, $\$ 211.00$; Alaska Road Commission, $\$ 175.00$.

## ROUTE 8C-COUNCIL FERRY:

This is a ferry across the Niukluk River at Council and connects Council with Route 8 .

Expenditure of $\$ 150.00$ was for salary of ferryman. No repairs were made this year.

## ROUTE 8D-COUNCIL-OPHIR CREEK ROAD (12 MILES WAGON ROAD)

This road follows up Ophir Creek to Crooked Creek. Mile 12. and then to the workings on Crooked Creek, Mile 14. The heaviest travel from Council is over this road, which is in very good condition. This road was originally maintained by the poll tax monies but has since been maintained by small appropriations from the Alaska Road Commission.

The work consisted of surfacing three thousand feet of road between Council and Ophir Creek, repairing six culverts, putting in two new ones and cleaning fifteen hundred feet of ditch.

Expenditure $\$ 1,002.50$

## ROUTE 8E-MELSING CREEK ROAD... (4 MILES WAGON ROAD)

This road follows up Melsing Creek to the end of the workings, four miles from Council. This road has been maintained by poll tax monies with some slight expenditures by the Alaska Road Commission.

No expenditures.
ROUTE 8F-WARM CREEK-ELKHORN TRAIL.. (11 MILES TRAIL)
This is a trail leading to Warm and Elkhorn Creeks. It leaves the Ophir Road at a point about two miles from Council and crosses the Ophir Divide to Warm Creek, a distance of six miles, and from Warm Creek it crosses a low divide to Elkhorn, a distance of five miles. The only monies expended on this road were from the poll tax collections.

No expenditures.

## ROUTE 8G-BEAR CREEK TROLLEY:

This trolley, on a cable suspended over Bear Creek for the benefit of foot travelers, is about two miles south of Council, near the Council corduroy crossing Bear Creek.

No expenditures.

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## ROUTE 8H-CASA DE FAGA ROAD......

From East Fork this road follows . about one mile to the mouth of Monta Ruby Divide into Ruby Creek, a distan miles. From Ruby the road follows dov work on the Casa. Some poll tax mon road in addition to the work done by a total of about twenty miles of wagon served in the Casa De Paga.

One thousand feet of corduroy wer The railroad ties used for this purpose before by the Territory. Expenditure $w$ and hire of one horse for the work.

Expenditures \$758.00.

## ROUTE 8I-HURRAH CREEK.

Commencing at the forty-four mil Hurrah Creek, a road crosses the Solol the bed of the creek about five miles and supplies the workings along Hurrah No expenditures.

## ROUTE 8J-SHOVEL CREEK

Commencing at the thirty-eight $n$ Shovel Creek, a road follows up. Shove Kasson and supplies the works along She

No expenditure.

## ROUTE 13A-NOME-BESSIE

$\square$
This is the main road leading from rection to the Bessie Claim on the Third

Expenditure prior to July 1st was feet of ditch, filling ruts and some hole tection during break-up, shoveling snow 1 rebuilding the bridge over Bourbon Creek Bridge.

This road is in good condition bi repair and maintenance work.

Expenditures: Territory of Alaska Commission, $\$ 981.94$; total, $\$ 2,407.74$.
ROUTE 13B-BESSIE-BANNER. $\qquad$
This road commences at the Bessir goers to Anvil Creek at the mouth of Spe Exprenditure prior to July 1st was fo
un and repair of seasonal damage; after
6.00 was for salary of ferryman, a pkeep and repairs. Territory of Alinmission, $\$ 175.00$.
f:
e Niukluk River at Council and conas for salary of ferryman. No re-

CREEK ROAD (12 MILES WAGON
, phir Creek to Crooked Creek. Mile s on Crooked Creek, Mile 14. The is over this road, which is in very as originally maintained by the poll n maintained by small appropriations ission.
iurfacing three thousand feet of road Creek, repairing six culverts, putting fifteen hundred feet of ditch.
:K ROAD ( 4 MILES WAGON ROAD)
elsing Creek to the end of the work1. This road has been maintained by ight expenditures by the Alaska Road

## ELKHORN TRAIL..(11 MILES TRAIL)

0 Warm and Elkhorn Creeks. It leaves. t. about two miles from Council and Warm Creek, a distance of six miles, cosses a low divide to Elkhorn, a disly monies expended on this road were

## TROLLEY:

e suspended over Bear Creek for the about two miles south of Council, near ng Bear Creek.

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ROUTE 8H—CASA DE FAGA ROAD...... (20 MILES WAGON ROAD) From East Fork this road follows the Solomon River bed for about one mile to the mouth of Montana Creek, then crosses the Ruby Divide into Ruby Creek, a distance of three and four-tenths miles. From Ruby the road follows down to the various camps at work on the Casa. Some poll tax money has been spent on this road in addition to the work done by the Territory. There is a total of about twenty miles of wagon trail to the various creeks served in the Casa De Paga.

One thousand feet of corduroy were laid on the Ruby Divide. The railroad ties used for this purpose were purchased the year before by the Territory. Expenditure was for labor of three men and hire of one horse for the work.

Expenditures $\$ 758.00$.
ROUTE 81-HURRAH CREEK. $\qquad$ (5 MILES WAGON ROAD)

Commencing at the forty-four mile post at the mouth of Hurrah Creek, a road crosses the Solomon River and follows up the bed of the creek about five miles to the Lane Quartz Wine and supplies the workings along Hurrah Creek.

No expenditures.
ROUTE 8J-SHOVEL CREEK.
(5 MILES WAGON ROAD)
Commencing at the thirty-eight mile post on Route 8 at Shovel Creek, a road follows up Shovel Creek to the works on Kasson and supplies the works along Shovel and its tributaries.

No expenditure.
ROUTE 13A-NOME-BESSIE. $\qquad$ ( $31 / 2$ MILES WAGON ROCAD)
This is the main road leading from Nome in a northerly direction to the Bessie Claim on the Third Beach line.

Expenditure prior to July 1st was for cleaning a thousand feet of ditch, filling ruts and some holes; after July 1 st for protection during break-up, shoveling snow from culverts and bridges, rebuilding the bridge over Bourbon Creek and repairs to Dry Creek Bridge.

This road is in good condition but will need some slight repair and maintenance work.

Expenditures: Territory of Alaska, $\$ 1,425.80$; Alaska Road Commission, $\$ 981.94$; total, $\$ 2,407.74$.

ROUTE 13B-BESSIE-BANNER. $\qquad$ (31/2 MILES WAGON ROAD)
This road commences at the Bessie at the end of 13 A and goes to Anvil Creek at the mouth of Specimen Gulci:

Expenditure prior to July 1st was for protection during breakup and repair of seasonal damage; after July 1 st for general re-

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pair and patching of a bad washout near the four and one-half mile post.

This road is in good condition but needs some surfacing between the four and five and one-half mile posts

Expenditures: Territory of Alaska, $\$ 414.80$; Alaska Road Commission, $\$ 820.22$; total, $\$ 1,235.02$.

## ROUTE 13C-BESSIE-LITTLE ............... ( $11 / 4$ MILES WAGON ROAD)

Commencing at the end of 13 A this road runs west to Little Creek and supplies the workings of the Pioneer Mining Company on Little Creek.

Expenditure prior to July 1st was for protection during break. up and repair of seasonal damage; after July ist was for three days work with tractor and grader leveling the road and bridging same to passable shape, repairs to culverts and cleaning of three hundred feet of ditch.

This road is in fair shape but needs constant attention as all the hauling to the Pioneer Mining Company goes over it.

Expenditures: Territory of Alaska, $\$ 265.10$; Alaska Road Commission, \$701.84; total, \$966.94.

## ROUTE 13D-BESSIE-DRY CREEK..... ( $11 / 2$ MILES WAGON ROAD)

Commencing at Bessie, at the end of 13 A , this road runs east along the Third Beach to Dry Creek.

Fair condition; very little traffic over this road and no work required.

No expenditures.
ROUTE 13E-DRY CREEK-NEWTON........ (1/2 MILE WAGON ROAD)
This road is an extension of 13 D east to Newton Gulch. where it comnects with 13 F at the four mile post.

There is very little traffic over this road and no work is required.

No expenditures.
ROUTE 13F-NOME-OSBORNE $\qquad$ (8 MILES WAGON ROAD)

This road starts from 13 A at about the mile and threequarter post and goes in an easterly direction to Osborne Creek.

Expenditure prior to July 1 st was for seasonal damage and protection during break-up. One thousand feet of road was suriaced with tailings from Bourbon Creek near the two mile post at an average yardage cost of $\$ 2.50$. The average haul was one and one-half miles. Two Pierce-Arrow trucks were used.

The work on this route after July 1st, between the two and three mile posts, consisted of surfacing one-half mile for a depth of ten inches with tailings from Dry Creek. Between the four

## ANNUAL REPORT ALASKA ROA

and five mile posts two thousand feet of duroy was done. There are three bad sp this section. From the five to six mile po and one or two bad spots filled. From $t$ half mile posts the entire road was dres five hundred feet of rip-rap was built $t$. washing. Total length of ditch cleaned, $\mathbf{r}$. teen hundred feet. Three new culverts six old ones repaired. Two thousand y; were hauled. From the seven and one-ha the ruts were filled and road made passal feet will need to be surfaced here next st

This road was placed in excellent far as the work was carried on. Of the is no really bad road. With the completion these three sections, totaling about one $m$ excellent condition.

Expenditures: Territory of Alaska, Commission $\$ 6,509.82$; total, $\$ 11,376.31$.

## ROUTE 13G-GRASS GULCH

$\qquad$
This road leaves 13 K at about the fiv post and follows a northerly course to Gr: Little traffic and no work required.

## ROUTE 13H-CENTER CREEK

$\qquad$
This road commences at about the o post on 13A and goes in a westerly direr. upper Center Creek.

Very little traffic and no work requi,
ROUTE 13I-NOME RIVER EXTENSION (5
This road commences at the eight at 13 K and follows the west bank of Nome five miles. Expenditure prior to July 1st sonal damage and maintenance during brea This road is not in very good shape 1 , over it does not justify any expenditure exc

Expenditures: Territory of Alaska, Commission, $\$ 363.97$; total, $\$ 925.72$.
ROUTE 13J-WONDER-FLAT
This road commences at about the mile post on 13 C , following in a southwes tailing piles on Wonder Creek to Flat Cr aska mines for their mining on these creek

JRT ALASKA ROAD COMMISSION.
a bad washout near the foll and one-half ood condition but needs some surfacing bee and one-half mile posts.
erritory of Alaska, $\$ 414.50$; Alaska Roan tal, \$1,235.02.
-ITTLE................(11/4 MILES WAGON ROAD)
ie end of 13 A this road runs west to Little $e$ workings of the Pioneer Mining Company
to July 1st was for protection during break. conal damage; after July 1st was for three $\prime$ and grader leveling the road and bridging se, repairs to culverts and cleaning of three
fair shape but needs constant attention as Pioneer Mining Company goes over it.
Territory of Alaska, $\$ 265.10$; Alaska Road total, $\$ 966.94$.
-DRY CREEK..... ( $11 / 2$ MILES WAGON ROAD)
Bessie, at the end of 13 A , this road runs east 1 to Dry Creek.
rery little traffic over this road and no work

REEK-NEWTON....... (1/2 MILE WAGON ROAD)
extension of 13 D east to Newton Gulch, where at the four mile post.
little traffic over this road and no work is
;

## -OSBORNE.

$\qquad$ (8 MILES WAGON ROAD)
ts from 13 A at about the mile and three$s$ in an easterly direction to Osborne Creek. or to July 1st was for seasonal damage and reak-up. One thousand feet of road was surrom Bourbon Creek near the two mile post at cost of $\$ 2.50$. The average haul was one and Pierce-Arrow trucks were used.
chis route after July 1st, between the two and snsisted of surfacing one-half mile for a depth tailings from Dry Creek. Between the foll
and five mile posts two thousand feet of patching with willow corduroy was done. There are three bad spots yet to be finished on this section. From the five to six mile posts the ditch was cleaned and one or two bad spots filled, From the six to seven and onehalf mile posts the entire road was dressed, ditches cleaned, and five hundred feet of rip-rap was built to protect the road from washing. Total length of ditch cleaned, rocked and sodded, seventeen hundred feet. Three new culverts were put in place and six old ones repaired. Two thousand yards of rock and gravel were hauled. From the seven and one-half to the eight mile post the ruts were filled and road made passable. About one thousand feet will need to be surfaced here next season.

This road was placed in excellent condition this season as far as the work was carried on. Of the sections remaining there is no really bad road. With the completion of the re-surfacing over these three sections, totaling about one mile, this road will he in excellent condition.

Expenditures: Territory of Alaska, $\$ 4,866.40$; Alaska Road Commission $\$ 6,509.82$; total, $\$ 11,376.31$.

ROUTE 13G-GRASS GULCH. $\qquad$ (2 MILES WAGON ROAD)
This road leaves 13 K at about the five and threequarter mile post and follows a northerly course to Grass and Nickola Gulches. Little traffic and no work required.

ROUTE 13 H -CENTER CREEK. $\qquad$ (11/2 MILES WAGON ROAD)

This road commences at about the one and one-quarter mile post on 13A and goes in a westerly direction to the workings on upper Center Creek.

Very little traffic and no work required.

## ROUTE 131-NOME RIVER EXTENSION (5 MILES WAGON ROAD)

This road commences at the eight and one-half mile post on 13 K and follows the west bank of Nome River for a distance of five miles. Expenditure prior to July 1 st was for repair of seasonal damage and maintenance during break-up.

This road is not in very good shape but the amount of traffic over it does not justify any expenditure except for seasonal damage.

Expenditures: Territory of Alaska, \$561.75; Alaska Road Commission, $\$ 363.97$; total, $\$ 925.72$.

ROUTE 13J-WONDER-FLAT $\qquad$ (2 MILES WAGON ROAD)
This road commences at about the three and three-quarter mile post on 13 C , following in a southwesteriy direction over the tailing piles on Wonder Creek to Flat Creek and serves the Araska mines for their mining on these creeks.

There is practically no traffic beyond the Flat Creek Bridge and but slight expenditure will be required.

ROUTE $13 K$-BESSIE-BUSTER. $\qquad$ . ( $71 / 2$ MILES WAGON ROAD)

This road commences at the end of 13 A and follows over the divide at the head of Dry Creek down the right limit of Dexter Creek to Nome River, where it crosses the mouth of Buster Creek and follows up Buster Creek on the left limit to the eleven mile post near Union Gulch.

Expenditure prior to July 1st was for maintenance during break-up and repair of seasonal damage. A road tender was kept on this road through the season, filling ruts, cleaning ditches, repairing culverts, and patching bad spots in the road. The work was done between the four and the seven and one-half mile posts. Roaci is now in good shape.

Expenditures: Territory of Alaska, \$7.00: Alaska Road Commission, $\$ 989.49$; total, $\$ 996.99$.

## ROUTE 18-KALTAG-SOLOMON. <br> $\qquad$ (2481/2 MILES. TRAIL)

Commencing at Kaltag, this overland mail trail crosses the divide or portage to the Unalakleet River, which it follows to Unalakleet. From Unalakleet it follows the coast to Bonanza on the east shore of Norton Bay, crossing to Isaacs Point on the west shore it follows the coast to Walla Walla, where it crosses the divide into the Quinahock. It then follows the Quinahock to its head, crossing the divide into McKinley Creek, which it follows to Golovin Bay and thence to Golovin. From Golovin it crosses to Portage Creek, which it follows to its head, crossing the divide into Cheruk Creek, which it follows to the coast. It follows the coast to Solomon and thence over Route 8 to Nome.

Work was done between Kaltag and Unalakleet and consisted of building three bridges over streams near the Twenty-two Mile Cabin, Old Woman, and Ten Mile Creek, the resetting of some of the trail stakes and the grading of two approaches out of the Unalakleet River.

The trail is in good condition but needs constant attention. Between Solomon and Spruce Creek the location of this trail should be removed from the lagoon as the overflows are contir. nally interrupting travel.

Expenditures: Alaska Road Commission $\$ 860.99$.
ROUTE 18A-BONANZA-KOTZEBUE. $\qquad$ (240 MILES TRAIL)
This winter mail trail leaves the Kaltag-Solomon mail trail, Route 18 , at Bonanza, Mile $931 / 2$, or 155 miles east of Nome on the east shore of Norton Bay and follows up Norton Bay to the mouth of the Koyuk River. Crossing over Star Mountain, it reaches

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the Koyuk River again at Dime Landins Haycock. Crossing successively the Pea. River Valley and the Sweepstakes Div. stakes Creek to its head. Crossing int, follows the right limit to Snyder's Ro the left limit as far as the mouth of La the river to Candle. From Candle, it fo for two miles, then cuts across the tur Willow Bay, and then follows the coast $t_{1}$ it crosses Kotzebue Sound on the ice follows the coast to Cape Blossom. Afte behind Cape Blossom, the coast is followed

Expenditure included in Route 6S, St

## ROUTE 18B-GOLOVIN-COUNCIL.

This winter mail trail leaves the Ka IS, at Golovin, Mile $1701 / 2$, or 78 miles $\epsilon$ : shore of Golovin Bay. It follows up Mountain, and thence up the Fish and N: Several portages need to be brushed $c$ Expenditures included in Ronte 68.
ROUTE 21-UNALAKLEET-ST. MICHAEL
This is the mail trail following the, St. Michaels Bay, where it crosses to St. ? Expenditure $\$ 50.00$.
ROUTE 25A-CRIPPLE RIVER. $\qquad$
This road commences at the beach : River and follows the river for twelve mil Willow Creek and on to Arctic and Sidnt on the left bank of the river.

Total expenditure of $\$ 64.95$ was fo: washout near the four mile post.
ROUTE $25 B$-FENNY RIVER $\qquad$
This road commences at the beach River and extends one and one-half miles travel to get around some deep sloughs.

Total expenditure of $\$ 88.00$ covered $g$ into Penny River and filling some holes $\$ \mathrm{nt}$ All the freight into Hungry, Oregon, hauled over this route. From the end of the of work it follows the creek onto the Dir of work it follows the creek onto the Dir
these creeks.
no traffic beyond the Flat Creek Bridge will be required.

STER........... (71/2 MILES WAGON ROAD)
$s$ at the end of 13 A and follows over. of Dry Creek down the right limit of er, where it crosses the mouth of Buster er rreek on the left limit to the eleven

July 1st was for maintenance cluring isonal damage. A road tender was kept $\geq$ season, filling ruts, cleaning ditches, Eching bad spots in the road. The work $r$ and the seven and one-half mile posts.
ory of Alaska, $\$ 7.00$; Alaska Roarl Com6.99 .

OMON. $\qquad$ ag, this overland mail trail crosses the !nalakleet River, which it follows to Unst it follows the coast to Bonanza on jay, crossing to Isaacs Point on the west $t$ to Walla Walla, where it crosses the

It then follows the Quinahock to its into McKinley Creek, which it follows -e to Golovin. From Golovin it crosses $t$ follows to its head, crossing the divide it follows to the coast. It follows the ce over Route 8 to Nome.
een Kaltag and Unalakleet and consisted over streams near the Twenty-two Mile 'en Mile Creek, the resetting of some of ading of two approaches out of the Una-
condition but needs constant attention. pruce Creek the location of this trail the lagoon as the overflows are contir.
a Road Commission $\$ 860.99$.
otzebue. $\qquad$ (240 MILES TRAIL)
il leaves the Kaltag-Solomon mail trail, le $931 / 2$, or 155 miles east of Nome on Bay and follows up Norton Bay to the Crossing over Star Mountain, it reaches
the Koyuk River again at Dime Landing and follows Route 62 to Haycock. Crossing successively the Peace River divide, the Peace River Valley and the Sweepstakes Divide, it follows up Sweepstakes Creek to its head. Crossing into the Keewalik Valley, it follows the right limit to Snyder's Roadhouse, then crosses to the left limit as far as the mouth of Lava Creek. It then follows the river to Candle. From Candle, it follows the Keewalik River for two miles, then cuts across the tundra for sixteen miles to Willow Bay; and then follows the coast to Deering. From Deering it crosses Kotzebue Souncl on the ice to Choris Peninsula. and follows the coast to Cape Blossom. After a portage of five miles behind Cape Blossom, the coast is followed to Kotzebue.

Expenditure included in Route 68, Staking Winter Trails.

## ROUTE 18B—GOLOVIN-COUNCIL............................ (35 MILES TRAIL)

This winter mail trail leaves the Kaltag-Solomon Trail, Route 18, at Golovin, Mile $1701 / 2$, or 78 miles east of Nome on the east shore of Golovin Bay. It follows up Golovin Bay to White Mountain, and thence up the Fish and Niukluk Rivers to Council. Several portages need to be brushed out and marked.
Expenditures included in Route 68.
ROUTE 21-UNALAKLEET-ST. MICHAEL........ (60 MILES TRAIL)
This is the mail trail following the coast from Unalakifet to St. Michaels Bay, where it crosses to St. Michaels.

Expenditure $\$ 50.00$.
ROUTE 25A-CRIPPLE RIVER.
(12 MILES WAGON ROAD)
This road commences at the beach at the mouth of Cripple River and follows the river for twelve miles to the workings near Willow Creek and on to Arctic and Sidney Creeks. It is mainly on the left bank of the river.

Total expenditure of $\$ 64.95$ was for temporary repairs to washout near the four mile post.

ROUTE 25B—PENNY RIVER.
( $11 / 2$ MILES WAGON ROAD)
This road commences at the beach at the mouth of Penny River and extends one and one-half miles up the river to allow travel to get around some deep sloughs.

Total expenditure of $\$ 88.00$ covered grading a new approach into Penny River and filling some holes near the one mile post.

All the freight into Hungry, Oregon, and Nugget Creeks is hauled over this route. From the end of the one and one-half miles of work it follows the creek onto the Divide and then around to these creeks.

## 80 ANNUAL REPORT ALASKA ROAD COMMISSION.

ROUTE 25C-NOME WIRELESS. $\qquad$ (1/2 MILE WAGON ROAD)

This road serves the wireless plant in Nome. It commences at Steadman Avenue near the beginning of Route 13 A and ex tends east to the wireless station.

## ROUTE 25D-MOUTH OF CENTER........ (2 MILES WAGON ROAD)

This road commences at the west city limits and follows the left bank of the Snake River to a short distance beyond the mouth of Center Creek.

Total expenditure was for maintenance and repair during break-up.

Expenditures: Territory of Alaska; $\$ 231.00$; Alaska Road Commission, $\$ 154$; total, $\$ 385.00$.

ROUTE $25 E-S U B M A R I N E$ PAYSTREAK (3 MILES WAGON ROAD)

This road commences near the one-half mile post on Route 25 D , crosses the Snake River Bridge and follows the right bank of Snake River to the workings on the Submarine.

Expenditure was for general repair over the entire length of the road, filling holes from adjacent tailing piles, leveling all the ruts and cleaning the ditches for the entire length.

Expenditures $\$ 550.75$.
ROUTE 25F-ANVIL GLACIER. $\qquad$ (3 MILES WAGON ROAD)

This road commences at Anvil Creek at the end of Route 13B and crosses the Divide to Glacier Creek.

Expenditures: Territory of Alaska, $\$ 14.30$; Alaska Road Commission, $\$ 50.50$; total, $\$ 64.80$.
ROUTE 25G-SNAKE RIVER EXTENSION (3 MILES WAGON ROAD)

This road commences at Glacier Creek at the end of Route 25 F , extends to and across Snake River and thence across the flat to Boulder Creek.

Total expenditure was for general repair and upkeep. A crew of men was sent out for six days to repair two bridges over sledge Creek and to place willow corduroy.

Expenditure $\$ 682.78$.
ROUTE 25 H -OTTER CREEK............... ( $11 / 2$ MILES WAGON ROAD)
This road extends from Mile $23 / 4$. Route 8 , in a northerly direction to and across Otter Creek.

No expenditures during the fiscal year.

ANNUAL REPORT ALASKA R

## ROUTE 251 -SINROCK FERRY:

A ferry across the Sinrock River, and fifty feet, on the Nome-Teller Trail, Total expenditure was for the sal Expenditures: Territory of Alas Commission, $\$ 279.00$; total, $\$ 382.50$.

## ROUTE 26-CANDLE-CANDLE CREEK

This road commences in Candle al to Paterson Creek and serves all of the Total expenditure was for genera: road. Sixty-nine hundred and twenty surfaced to a depth of ten inches wi piles. The average haul was one mile dollars per yard. The ditches were paired, and road left in excellent conditi

Expenditures: Territory of Alas Commission, $\$ 4,453.49$; total, $\$ 4,982.61$.

## ROUTE 26A-KUGRUK RIVER APPRO

At the coal mine on the Kugruk river was made. It is twelve hundred ten feet wide, with an average cut of $t$ Expenditures $\$ 488.00$.
ROUTE 27-DEERING-INMACHUK. $\qquad$
This road commences at Deering ings on the Inmachuk. It is improved miles on the left bank. From the latte bed.

Totai expenditure was for extendin; chuk River to the twelve mile post. fifty feet of road were built of willow $c$ gravel, ditched for the entire length and road. The road is ten feet wide and 1 a depth of ten inches.

Expenditures: Territory of Alask: Commission, $\$ 371.04$; total, $\$ 6,371.04$.
ROUTE 28-DAHL CREEK-CANDLE TR,
This is an overland trail between going in a northeasterly direction from $D$ River, then following the east slope of Boulder, where it crosses into Aurora mouth of Aurora Creek, crosses the Nox

ALASKA ROAD COMMISSION.

ESS
(1/2 MILE WAGON ROAD)
ireless plant in Nome. It commences the beginning of Route 13 A and exiation.
;ENTER........ (2 MILES WAGON ROAD)
at the west city limits and follows the $r$ to a short distance beyond the mouth
$s$ for maintenance and repair during ory of Alaska, $\$ 231.00$; Alaska Road ; 85.00 .
三 PAYSTREAK (3 MILES WAGON
; near the one-half mile post on Route
iver Bridge and follows the right bank kings on the Submarine.
general repair over the entire length from adjacent tailing piles, leveling all ditches for the entire length.

## CIER

(3 MILES WAGON ROAD)
$s$ at Anvil Creek at the end of Route 13 B to Glacier Creek.
ritory of Alaska, $\$ 14.30$; Alaska Road l, \$64.80.
IIVER EXTENSION (3 MILES WAGON
:es.at Glacier Creek at the end of Route ross Snake River and thence across the
as for general repair and upkeep. A crew six days to repair two bridges over sledge w corduroy.

REEK. $\qquad$ ( $11 / 2$ MILES WAGON ROAD)
from Mile $23 / 4$, Route 8 ; in a northerly ditter Creek.
uring the fiscal year.

ANNUAL REPORT ALASKA ROAD COMMISSION.

## ROUTE 25I-SINROCK FERRY:

A ferry across the Sinrock River, distance about one hundred and fifty feet, on the Nome-Teller Trail, Route 67.

Total expenditure was for the salary of the ferryman.
Expenditures: Territory of Alaska, $\$ 103.50$; Alaska Road Commission, $\$ 279.00$; total, $\$ 382.50$.

ROUTE 26-CANDLE-CANDLE CREEK.... (6 MILES WAGON ROAD)
This road commences in Candle and follows up Candie Creek to Paterson Creek and serves all of the mining on Candle Creek.

Total expenditure was for general repair and surfacing the road. Sixty-nine hundred and twenty-three feet of road were surfaced to a depth of ten inches with gravel from old tailing piles. The average haul was one mile and the yardage cost four dollars per yard. The ditches were cleaned, three culverts repaired, and road left in excellent condition.

Expenditures: Territory of Alaska, \$529.12; Alaska Road Commission, $\$ 4,453.49$; total, $\$ 4,982.61$.

ROUTE 26A-KUGRUK RIVER APPROACH:
At the coal mine on the Kugruk River an approach to the river was made. It is twelve hundred and twenty-five feet long, ten feet wide, with an average cut of three feet.

Expenditures $\$ 488.00$.
ROUTE 27-DEERING-INMACHUK....... (25 MILES WAGON ROAD)
This road commences at Deering and extends to the workings on the Inmachuk. It is improved for a distance of twelve miles on the left bank. From the latter point it follows the river bed.

Total expenditure was for extending the road on up to Inmachuk River to the twelve mile post. Seventy-nine hundred and fifty feet of road were built of willow corduroy covered with river gravel, ditched for the entire length and six culverts placed in the road. The road is ten feet wide and was covered with gravel to a depth of ten inches.

Expenditures: Territory of Alaska, $\$ 6,000.00$; Alaska Road Commission, \$371.04; total, \$6,371.04.

ROUTE 28-DAHL CREEK-CANDLE TRAIL......(140 MILES TRAIL)
This is an overland trail between Dahl Creek and Candle, going in a northeasterly direction from Dahl Creek to the Kougarok River, then following the east slope of the divide to the head of Boulder, where it crosses into Aurora Creek. It follows to the mouth of Aurora Creek, crosses the Noxapaga, and goes up Berry

Creek, crossiing the divide to the mouth of the right fork of Good Hope, thence up Cottonwoor to Divide Creek, thence up Divide Creek, crossing the Divide and following the ridge to the immachuk River. Thence down the Immachuk to Arizona Creek, thence easterly over the Divide to Wade Creek, thence crossing Wade Creek in an easterly direction across the Kugruk Flats to the Kugruk River, thence easterly over the divide to the mouth of Paterson, thence down the Candle-Candle Creek Road to Candie.

## ROUTE 28A-NOME-TAYLOR.

$\qquad$ (135 MILES TRAIL)
This winter mail trail leaves Nome over Routes 13 A and 13 K to the mouth of Dexter Creek. Crossing Nome River, it follows the left limit to the mouth of Willow Creek, then recrosses and follows the right limit to the U. S. Roadhouse at Dorothy Creek, then the left limit again and over the divide to Nugget Creek. From the Nugget Roadhouse, it crosses Salmon Lake, follows down Pilgrim River to Iron Creek, then across the flats to the Hot Springs. It then cuts across to Marys Igloo and up the Kusatrin River to Shelton, the northern terminus of the summer tram lime (Seward Peninsular Railway). From Shelton, the trail proceeds to Dahl, and then up the Kougarok River to Taylor.

Expenditures $\$ 1,140.00$.

## ROUTE 37-TOPKOK-CANDLE WINTER TRAIL (154 MILES TRAIL)

This is the Cande mail trail. It leaves the overland mail trail route 18 at Topkok, fifty-three miles east of Nome, and follows the Topkok River to its head, thence over the Divide into Skookum, crossing the same and the Fish River and Niukluk Flats to Council. This portion is the regular Council winter trail. From Council the trail follows up Melsing Creek to the head, crosses the divide into the Fish River Flats, then crossing same in a general northeasterly direction to Telephone Creek. Following Telephone Creek to its head it then crosses the Divide and goes down the Koyuk Valley. It then crosses over into First Chance Creek and up to its head, then over the Divide into Gold Run Creek. Following down Gold Run to within two miles of the mouth, the trail then swings northerly and parallels the Keewalik River to Glacier Creek, then on the left bank of the Keewaiik River to near the mouth of Lava Creek and then on the Keewalik to Candle. The portion between Council and the mouth of Hunter Creek is but slightly used as the mail now goes in via Haycock. and the two trails join at the mouth of Hunter Creek or near' Snyder's Roadhouse. There is considerable travel on this trail between Council and the coast at Topkok.

Expenditures $\$ 210.00$.

ANNUAL REPORT ALASKA

## ROUTE 41-KIANA-KLERY CREEK TRAIL)

A permanent staked winter tra connects Kiana and Klery. One mil, duroyed by the Alaska Road Commis collected for road tax.

Expenditures \$237.15

## ROUTE 41A-KOTZEBUE-SHUNGNAI

This winter trail extends from port on Kotzebue Sound, across to the River to Shungnak. Several shelter ca Territory and several more are needed to the trail. All portages will have and marked, some new portages made, as the banks of the river are high and

No expenditures during the fiscal 5

## ROUTE 41B-KOTZEBUE-POINT BARF

This winter mail trail extends fri mainland and then along the coast to investigation.

A shelter cabin near the village thorized.

No expenditures during the fiscal $y$

## ROUTE 42-ST. MICHAELSKOTLIK TI

This is a winter mail trail to Ko
to Marshall. From St. Michaels it fol
St. Michaels Canal for eight miles, th. the mainland. Thence in a southweste Village, a distance of twenty-seven mill Romanof to the beach seven miles, the) miles. Thence by Pastolik to Kotlik, twe With the completion of the work past fall, this route should be in excelle, Expenditure $\$ 270.00$.
ROUTE 49-DAVIDSONS LANDING.TAY
ROAD, 16 MILES SLED ROAD This road connects the head of naTeller with Taylor Creek. From Davi
the the Marys River to its head, a distance o. over coco Hill to the head, of distance o
thence down Henry Creek to the Kougaro
vide to the mouth of the right fork of Good onwood to Divide Creek, thence up Divide rivide and following the ridge to the inma. own the Immachuk to Arizona Creek, thence ide to Wade Creek, thence crossing Wade direction across the Kugruk Flats to the easterly over the divide to the mouth of the Candle-Candle Creek Road to Candie.

## AYLOR

$\qquad$ ( 135 MILES TRAIL) trail leaves Nome over Routes 13A and 13 K er Creek. Crossing Nome River, it follows mouth of Willow Creek, then recrosses and
to the U. S. Roadhouse at Dorothy Creek, gain and over the divide to Nugget Creek. oadhouse, it crosses Salmon Lake, follows o Iron Creek, then across the flats to the cuts across to Marys Igloo and up the Kusathe northern terminus of the summer tram lar Railway). From Shelton, the trail prol up the Kougarok River to Taylor. t0.00.
C.CANDLE WINTER TRAIL (154 MILES e mail trail. It leaves the overland mail trail tifty-three miles east of Nome, and follows to its head, thence over the Dicrossing the same and the Fish River Council. This portion is the regular Council ouncil the trail follows up Melsing Creek to divide into the Fish River Flats, then cross1 northeasterly direction to Telephone Creek. Sreek to its head it then crosses the Divide oyuk Valley. It then crosses over into First to its head, then over the Divide into Gold 5 down Gold Run to within two miles of the swings northerly and parallels the Keewalik sk, then on the left bank of the Keewalik ith of Lava Creek and then on the Keewalik n between Council and the mouth of Hunter used as the mail now goes in via Haycock, in at the mouth of Hunter Creek or near There is considerable travel on this trail he coast at Topkok.
0.00 .

ROUTE 41-KIANA-KLERY CREEK (1 MILE ROAD, 11 MILES TRAIL)

A permanent staked winter trail, twelve miles in length, connects Kiana and Klery. One mile of the trail has been corduroyed by the Alaska Road Commission with the help of funds collected for road tax.

Expenditures $\$ 237.15$

## ROUTE 41A-KOTZEBUE-SHUNGNAK..............(200 MILES TRAIL)

This winter trail extends from Kotzebue, an open summer port on Kotzebue Sound, across to the mainland and up the Kobuk River to Shungnak. Several shelter cabins have been built by the Territory and several more are needed, as well as general repairs to the trail. All portages will have to be brushed out, staked, and marked, some new portages made, and all approaches graded as the banks of the river are high and steep.

No expenditures during the fiscal year.
ROUTE 41B-KOTZEBUE-POINT BARROW..... (500 MILES TRAIL)
This winter mail trail extends from Kotzebue across to the mainland and then along the coast to Point Barrow. It is under investigation.

A shelter cabin near the village of Kivalina has been authorized.

No expenditures during the fiscal year.
ROUTE 42-ST. MICHAELS-KOTLIK TRAIL..... ( 70 MILES TRAIL)
This is a winter mail trail to Kotlik and on up the Yukon to Marshall. From St. Michaels it follows the left bank of the St. Michaels Canal for eight miles, thence crosses the Canal to the mainland. Thence in a southwesterly direction to Pitmatalik Village, a distance of twenty-seven miles. Thence back to Point Romanof to the beach seven miles, thence to Coffee Point twelve miles. Thence by Pastolik to Kotlik, twelve miles.

With the completion of the work of permanent staking this past fall, this route should be in excellent shape.

Expenditure $\$ 270.00$.

## ROUTE 49-DAVIDSONS LANDING-TAYLOR (24 MILES WAGON ROAD, 16 MILES SLED ROAD)

This road connects the head of navigation on Imuruk from Teller with Taylor Creek. From Davidsons Landing it follows the Marys River to its head, a distance of twenty-four miles, thence over Coco Hill to the head of Coarse Gold Creek to Henry Creek, thence down Henry Creek to the Kougarok; it follows the Kougarok
to Taylor Creek. This road was originally built by the Kougarok Mining and Ditch Company and has had work done upon it by them and also by the Taylor Creek Ditch Company, Kelliher Dredg. ing Company, the Behring Dredging Company and Dave Johnson Freighting Company. In 1916 this route was taken over by the Alaska Road Commission and maintained by them since.

Total expenditure prior to July 1st was for material for use during season. Six culverts were placed in the road, twenty holes were patched and two of the approaches out of Marys River regraded where washed out by high water. One thousand feet of ditch was dug around the head of Coarse Gold and two hundred feet of road graded about four miles from Taylor on Lincoln Creek.

Expenditures: Territory of Alaska, $\$ 1,000.00$; Alaska Road Commission, $\$ 32.00$; total, $\$ 1,032.00$.

## ROUTE 62-DIME CREEK CORDUROY.... (9 MILES WAGON ROAD)

This road connects Dime Landing, which is situated on the Koyuk River about thirty-five miles from the mouth and two miles from the confluence of Dime Creek and the Koyuk, with the workings on Dime Creek at the Postoffice of Haycock and extends on up Dime Creek to No. 7 above.

Twelve thousand nine hundred and fifty feet of corduroy were laid and covered. There yet remains two thousand eight hundred and fifty feet of this road to be completed which will make a continuous road to the head of Dime Creek.

Expenditures: Territory of Alaska, $\$ 6,361.29$; Alaska Road Commission, $\$ 7,680.51$; total, $\$ 14,041.80$.

ROUTE 67-NOME-TELLER.
(80 MILES TRAIL)
This is the winter mail trail to Teller and Cape Prince of Wales. It is permanently staked from Nome to Teller. It follows the coast from Nome to Cape Douglas, where it cuts across to Cape Riley and then into Teller.

No expenditures during the fiscal year.
ROUTE 67A-TELLER-LOST RIVER. $\qquad$
This is the extension of Route 67 towards Cape Prince of Wales. It was permanently staked as far as Lost River, crossing the Bay from Teller to the Reindeer Station and thence on the Beach to Lost River.

Expenditure $\$ 420.00$.
ROUTE 67B-TELLER-BLUESTONE.
(18 MILES TRAIL)
From Teller there is a wagon road leading across the tundra to Gold Run and the Bluestone country, a distance of eightee

## ANNUAL REPORT ALASKA ROA:

miles. This road had some road tax exl. aska Road Commission has furnished so: ing several small bridges on it. It is : Gold Run and the Bluestone.

No expenditure during the fiscal year.

## ROUTE 67C-TELLER-MARYS IGLOO..

Though not a mail trail, this is a we from Teller to Marys Igloo via Grantly F the Kuzitrin River.

No expenditure during the fiscal year.

## ROUTE 68-FLAGGING TRAILS

Under this heading all expenditures cluded. The expenditure includes the pi making flags, and the cost of straightenin placing the missing ones on the permanen around Nome, throughout the Seward Pe with the Yukon Valley. Many of the trails and are staked by the miners themselves their workings occur. In these cases th material for staking and the miners do the

Expenditures: Territory of Alaska, Commission, $\$ 4,657.20$; total, $\$ 5,363.20$, inc 18 A and 18 B , a total of 275 miles, in additio

NAME OF ROUTE
Kotzebue to Riley Channel on Kobu Kotzebue to Seesalik on Pt. Barrow Lockhart Point to Mouth Noatak .. Deering to Choris Peninsula .
Deering to Choris Peninsula
Deering to Wilow Bay
Keewalik to Choris Peninsula
Keewalik to Callahan's Cabin …...... Callahan's to Nazuruk Mouth Kobuli Candee to Keewalik
Teller to Gold Run
Teller to Douglas
Teller to Mission
Teller to Mead of Harbor
Teller to Igloo Creek
Romanof to Coffee Point
Cheelana to Kotilik Point
St. Michael's Bay
Bonanza to Mouth Koyuk
Isaacs to Mouth Koyuk
Bonanza to Isaacs Point 10 Caches
Moses to Walla Walla .........................
Mckinley Creek to west side Golovin Golovin to White Mountain
Nome Locals
Around Bluff
Around Topkok Head
Around Cape Nome
Around Salmon Lake
Total
road was originally built by the Kougarok rany and has had work done upon it by lylor Creek Ditch Company, Kelliher Dredg. ing Dredging Company and Dave Johnson 11916 this route was taken over by the 1 and maintained by them since.
?rior to July 1st was for material for use erts were placed in the road, twenty holes of the approaches out of Marys River relut by high water. One thousand feet of he head of Coarse Gold and two hundred bout four miles from Taylor on Lincoln
ritory of Alaska, $\$ 1,000.00$; Alaska Road . $1, \$ 1,032.00$.
:K CORDUROY... (9 MILES WAGON ROAD)
; Dime Landing, which is situated on the irty-five miles from the mouth and two ce of Dime Creek and the Koyuk, with the eek at the Postoffice of Haycock and ek to No. 7 above.
nine hundred and fifty feet of corduroy
There yet remains two thousand eight of this road to be completed which will to the head of Dime Creek.
ritory of Alaska, $\$ 6,361.29$; Alaska Road total, $\$ 14,041.80$.

## LER

. (80 MILES TRAIL)
r mail trail to Teller and Cape Prince of utly staked from Nome to Teller. It folome to Cape Douglas, where it cuts across into Teller.
uring the fiscal year.
LOST RIVER $\qquad$ (21 MILES TRAIL)
sion of Route 67 towards Cape Prince of ently staked as far as Lost River, crossing - the Reindeer Station and thence on the '.
BLUESTONE.
(18 MILES TRAIL)
is a wagon road leading across the tundrid Bluestone country, a distance of eighteen
miles. This road had some road tax expended on it and the Alaska Road Commission has furnished some timber for constructing several small bridges on it. It is still used for hauling to Gold Run and the Bluestone.

No expenditure during the fiscal year.
ROUTE 67C-TELLER-MARYS IGLOO.
(40 MILES TRAIL)
Though not a mail trail, this is a well traveled winter route from Teller to Marys Igloo via Grantly Harbor, Imuruk Bay and the Kuzitrin River.

No expenditure during the fiscal year.
ROUTE 68-FLAGGING TRAILS.......................... (536 MILES TRAILS)
Under this heading all expenditures for winter work are included. The expenditure includes the purchase of material for making tlags, and the cost of straightening up all stakes and replacing the missing ones on the permanently staked winter trails around Nome, throughout the Seward Peninsula and connecting with the Yukon Valley. Many of the trails are only seasonal ones and are staked by the miners themselves to the creeks on which their workings occur. In these cases this board furnishes the material for. staking and the miners do the work.

Expenditures: Territory of Alaska, \$706.00; Alaska Road Commission, $\$ 4,657.20$; total, $\$ 5,363.20$, includes work on Routes 18 A and 18 B , a total of 275 miles, in addition to the following:
NAME OF ROUTE

ROUTE 73-MARSHALL ROAD............ (41/4 MILES WAGON ROAD)
This road was constructed by the Territory. Two and twelvehundredths miles are corduroy and two and thirteen-hundredths miles graded road. It connects the landing ten miles above Marshall with the workings on Willow Creek.

Total expenditure was for repairs and protection during the break-up. Present condition poor.

Expenditures: Territory of Alaska, $\$ 356.50$.
ROUTE 73A-KOTLIK-MARSHALL ..................... (190 MILES TRAIL)
Two sections of work were performed on the winter mail trail between Kotlik and Marshall; first, between Old Hamilton and New Hamilton; second, between Andreafsky and Pilot Station.

Expenditure $\$ 850.00$.
ROUTE 73B-STUYAHOK $\qquad$ (11 MILES SLED ROAD)
This is a new project. It consists of an eleven mile winter sled road and summer trail from the landing on the Yukon River below Russian Mission across to the new diggings on Stuyahok Creek. The Creek is reported to have produced about $\$ 7,000$ the first season.

The proposed route was cleared at a cost of $\$ 660.00$.

## ROUTE 77-SHELTON FERRIES:

These are two ferries over the two branches of the Kuzitrin River at Shelton, each about one hundred feet across. They are free ferries, a ferryman beịng paid to place them in commission in the spring and take them out in the fall and to provide for ferrying passengers during the break-up and freeze-up.

Expenditure $\$ 300.00$.

## ROUTE 7TA—FERRIES:

In addition to Bonanza Ferry, Route 8 A , Safety Ferry, Route $8 B$, Council Ferry, Route 8 C , and the Shelton Ferries, Route 7 i , there are four other ferries in the Nome District which have heretofore not been assigned route numbers.

Cripple River Ferry: This is a free ferry over the mouth of Cripple River which is at this point about one hundred feet wide. It consists of a whale boat on an endless cable.

The cabin in which the cable and blocks were stored was destroyed by a storm last fall and the dead-men washed out. Natives saved the blocks and boat but were unable to save the cable. A new cable was purchased and installed. Additional expenditure was for taking the boat out of the river and placing it in winter quarters.

## ANNUAL REPORT ALASKA ROAD

Nome River Ferry: This is a small $s$ across Nome River, where a bridge has $b^{\prime}$ Seward Peninsular Railway. It is used $b$. the cars drawn by dogs on the railway.

Ninety-eight dollars were expended for ce. ing it in the water, and making ready for $i$

Kougarok Ferry: This is a free fer: River on the Dahl Creek-Candle Trail, Rout small boat on an endless cable.

No expenditure during the fiscal year.
Kiana Ferry: This is a free ferry or Kiana-Klery Creek Trail, Route 41 . It consi. an endless cable.

An additional ferry over Squirrel River stalled. The boat was purchased at Kiana, and ropes had to be shipped from Nome.

Total expenditure $\$ 466.79$.

## ROUTE 77B-BRIDGES:

The following bridges have not here route numbers:

Nome River Bridge: This is the mai bridge across Nome River on Route. 8 , neal unusual ice conditions caused by heavy stor dynamite was used in blowing out the ice : Expenditures \$497.18. (Included in Rout
Snake River Footbridge: This is a susp Snake River near the mouth of Boulder Cree No expenditures during the fiscal year.
Shelton Footbridge: This is a suspens slough near Shelton.

No expenditures during the fiscal year.
Kougarok Footbridge: This is a suspe the hougarok River near the mouth of Coarse No expenditures during the fiscal year.
Taylor Footbridge: This is a suspensior lor Creek at Taylor.

No expenditures during the fiscal year.
Burnt River Footbridge: This is a suspe
Burnt River on the Dahl Creek-Candle Trail, 1 No expenditures during the fiscal year.
feet Bull Creek Bridge: This is a highway
leet long, across Bull Creek, giving access

ALASKA ROAD COMMISSION.
OAD ........... ( $41 / 4$ MILES WAGON ROAD)
acted by the Territory. Two and twelveduroy and two and thirteen-hundredths ects the landing ten miles above Marshall , w Creek.
s for repairs and protection during the in poor.
ory of Alaska, $\$ 356.50$.
, RSHALL. $\qquad$ (190 MILES TRAIL) rk were performed on the winter mail Marshall; first, between Old Hamilton id, between Andreafsky and Pilot Station.
K... $\qquad$ (11 MILES SLED ROAD) ect. It consists of an eleven mile winter rail from the landing on the Yukon River across to the new diggings on Stuyahok zported to have produced about $\$ 7,000$ the
was cleared at a cost of $\$ 660.00$.
FERRIES:
ries over the two branches of the Kuzitrin about one hundred feet across. They are a being paid to place them in commission ₹ them out in the fall and to provide for ring the break-up and freeze-up.
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S:
nanza Ferry; Route 8A, Safety Ferry, Route ute 8 C , and the Shelton Ferries, Route 7 T , ferries in the Nome District which have ;signed route numbers.
orry: This is a free ferry over the mouth ch is at this point about one hundred feet aich the cable and blocks were stored was last fall and the dead-men washed out. Nas and boat but were unable to save the cable. Jurchased and installed. Additional expendithe boat out of the river and placing it in

Nome River Ferry: This is a small scow running on a cable across Nome River, where a bridge has been washed out on the Seward Peninsular Railway. It is used by foot passengers and the cars drawn by dogs on the railway.

Ninety-eight dollars were expended for caulking the scow, placing it in the water, and making ready for the season's operations.

Kougarok Ferry: This is a free ferry over the Kougarok River on the Dahl Creek-Candle Trail, Route 28. It consists of a small boat on an endless cable.

No expenditure during the fiscal year.
Kiana Ferry: This is a free ferry over the slough on the Kiana-Klery Creek Trail, Route 41 . It consists of a small boat on an endless cable.

An additional ferry over Squirrel River, near Kiana, was installed. The boat was purchased at Kiana, but the cable, blocks and ropes had to be shipped from Nome.

Total expenditure \$466.79.
ROUTE T7B-BRIDGES:
The following bridges have not heretofore been assigned route numbers:

Nome River Bridge: This is the main highway suspension bridge across Nome River on Route 8, near Fort Davis. Due to unusual ice conditions caused by heavy storms during the winter, dynamite was used in blowing out the ice to protect this bridge.

Expenditures \$497.18. (Included in Route 8.)
Snake River Footbridge: This is a suspension footbridge over Snake River near the mouth of Boulder Creek.

No expenditures during the fiscal year.
Shelton Footbridge: This is a suspension footbridge over a slough near Shelton.

No expenditures during the fiscal year.
Kougarok Footbridge: This is a suspension footbridge over the Kougarok River near the mouth of Coarse Gold Creek.

No expenditures during the fiscal year.
Taylor Footbridge: This is a suspension footbridge over Taylor Creek at Taylor.

No expenditures during the fiscal year.
Burnt River Footbridge: This is a suspension footbridge over Burnt River on the Dahl Creek-Candle Trail, Route 28.

No expenditures during the fiscal year.
Bull Creek Bridge: This is a highway bridge about eighteen feet long, across Bull Creek, giving access to the Sunset Creek

## $\bullet$

workings west of Nome. The Creek has very steep banks and a gumbo bottom.

The bridge was washed off its abutments during the breakup and had to be replaced in position.

Expenditures \$45.00.

## ROUTE 77C-TROLLEYS:

There are two passenger trolleys in this district which have not heretofore been assigned route numbers:

Snake River Trolley: This trolley consists of a passenger cage suspended from a cable across Snake River near Monument Creek.

No expenditures during the fiscal year.
Nome River Trolley: This trolley consists of a passenger cage suspended from a cable across Nome River near the mouth of Osborne Creek.

No expenditures during the fiscal year.

## EXAMINATIONS AND SURVEYS.

## ROUTE 89—NOME-SHELTON-KEEWALIK RECONNAISSANCE:

The Act of Congress making appropriations for the Support of the Army for the fiscal year ending June 30 , 1922, under the item, "Construction and maintenance of military and post roads, bridges and trails, Alaska," provided:
"That not to exceed $\$ 10,000$ of the foregoing amount shall be expended for a preliminary investigation and report on the feasibility, desirability, and cost of the best and most practicable connection between the Nome-Shelton system of communications and the coal deposits of the Kugruk River, Chicago Creek, and the Keewalik Mining District, whether by wagon road, sled road, tramway, trail, or other means."

In accordance with the requirements of this section, Mr. A. G. Blake, a competent civil engineer with long experience on the Seward Peninsula, was engaged to take charge of the reconnaissance. Mr. Blake spent thirty-four days in cruising over the country north of Shelton and between the Kougarok and Candle. A total of five hundred miles of various routes were followed by him:
A. Shelton to Taylor Creek via Kougarok River and Dahl Creek;
B. Taylor Creek to Shelton via ridge on west watershed of Kougarok River;
C. Davidsons Landing to Shelton partially;
D. Shelton to Imuruk Lake-Kugruk River-Silver Mine and Candle:

## ANNUAL REPORT ALASKA ROAC

E. Candle to Wallin Coal Mine and I
F. Inmachuk River to Shelton via G Creek, Boulder Creek, Dahl Creel traveled route and staked trail.

The field work was completed in $S$ report with a recommended system of ; being prepared.

Expenditure: Alaska Road Commissio ROUTE 89A-SEWARD PENINSULA Rt TRAM)

Chapter 39, Session Laws of Alaska, Federal Board of Road Commissioners for $A$ and approval of the Territorial Board of were authorized to purchase the Seward tending from Nome to Shelton, for use as a way. This narrow gauge railroad for maj abandonment as a steam railroad, has bt overland artery of communication with the trict and the other placer mining camps o of the Seward Peninsula. The repair of tl out portions of track are of great public int complished provided the structure was pūbli

An examination and inventory of this Mr. A. G. Blake, a competent civil enginee pose. Negotiations were entered into wit of the railroad and they agreed to accept the entire road. The purchase at this pri agreements appended thereto requiring the $p$ tain the road bed in case the same should mining operations in certain localities, wa Territorial Board of Road Commissioners is of the title for the property made by the $\mathrm{T}_{1}$ eral and following this, it is believed the ac summated.

This railroad will be of great service transportation problem of the Seward affecting traffic movement to the Kougaro the north portion of the Seward Peninsula. are the construction of three bridges, and maintenance for the type of traffic carried light. The price agreed upon, $\$ 25,000$, fo eight-seven miles of summer and winter $r$ in view of the service rendered even und ditions.

ALASKA ROAD COMMISSION.
he Creek has very steep banks and a
d off its abutments during the breakin position.
ger trolleys in this district which have ad route numbers:

This trolley consists of a passenger ble across Snake River near Monument

1g the fiscal year.
This trolley consists of a passenger able across Nome River near the mouth
ing the fiscal year.

## ATIONS AND SURVEYS.

## -TON-KEEWALIK RECONNAISSANCE:

; making appropriations for the Support of rear ending June 30 , 1922, under the item, mance of military and post roads, bridges ded:
l $\$ 10,000$ of the foregoing amount shall be ary investigation and report on the feasicost of the best and most practicable con, me-Shelton system of communications and ie Kugruk River, Chicago Creek, and the $t$, whether by wagon road, sled road, tramans."
the requirements of this section, Mr. A. G. vil engineer with long experience on the $s$ engaged to take charge of the reconspent thirty-four days in cruising over the on and between the Kougarok and Candle. d miles of various routes were followed by
aylor Creek via Kougarok River and Dahl to Shelton via ridge on west watershed of -er;
nding to Shelton partially; muruk Lake-Kugruk River-Silver Mine and
E. Candle to Wallin Coal Mine and Immachuk River; and
F. Inmachuk River to Shelton via Good Hope River, Aurora Creek, Boulder Creek, Dahl Creek, etc., over the usually traveled route and staked trail.

The field work was completed in September and the final report with a recommended system of communications is now being prepared.

Expenditure: Alaska Road Commission $\$ 3,984.66$.

## ROUTE 89A—SEWARD PENINSULA RAILROAD (87 MILES TRAM)

Chapter 39, Session Laws of Alaska, 1921, provided that the Federal Board of Road Commissioners for Alaska with the consent and approval of the Territorial Board of Road Commissioners, were authorized to purchase the Seward Peninsula Railroad extending from Nome to Shelton, for use as a public tram and highway. This narrow gauge railroad for many years, following its abandonment as a steam railroad, has been used as the main overland artery of communication with the Kougarok mining district and the other placer mining camps on the northern portion of the Seward Peninsula. The repair of the bridges and washed out portions of track are of great public interest and could be accomplished provided the structure was püblicly acquired.

An examination and inventory of this railroad was made by Mr. A. G. Blake, a competent civil engineer, engaged for the purpose. Negotiations were entered into with the present owners of the railroad and they agreed to accept a price of $\$ 25,000$ for the entire road. The purchase at this price, with certain other agreements appended thereto requiring the present owners to main. tain the road bed in case the same should be disturbed by placer mining operations in certain localities, was recommended. The Territorial Board of Road Commissioners is now having a search of the title for the property made by the Territorial Attorney General and following this, it is believed the acquirement will be con. summated.

This railroad will be of great service in relieving the entire transportation problem of the Seward Peninsula particularly affecting traffic movement to the Kougarok mining district and the north portion of the Seward Peninsula. The necessary repairs are the construction of three bridges, and thereafter the cost of maintenance for the type of traffic carried upon the road will be light. The price agreed upon, $\$ 25,000$, for the acquirement of eight-seven miles of summer and winter road, is a nominal one in view of the service rendered even under present traffic conditions.

## )NAL EXAMINATIONS.

: Board made a thorough examination ot I the Nome-Council Road and the Nome ember. Last fiscal year a thorough ex the District Superintendent of all wintel nding the same as far north as Kotzebue Seward Peninsula. During the present and reconnaissance of all summer routes of the Seward Peninsula is being made. ason all routes, winter and summer, will some qualified employee or member of

## HELTER CABINS.

as expended during the year for shelter 'he following work was done:

| \$ | 768.43 |
| :---: | :---: |
| jin at Topkok and repairs | 260.00 |
| River Cabins, repairs .................................. | 135.01 |
| airs | 72.06 |
| pe, wood, roofing, etc. | 189.59 |
|  | 1,500.00 |

TION OF EXPENDITURES.

| Miles* | Expenditures | Unit Cost <br> Dollars per Mile |
| :---: | :---: | :---: |
| $\ldots . . .2113 / 4$ |  |  |
| $\cdots . . .11891 / 2$ |  |  |
| $\cdots . .536$ |  |  |
| $\ldots . .1 .9641 / 4$ | $\$ 88,016.12$ | $\$ 44.85$ |

ined during fiscal year only.
[RACTS IN FORCE.

## ERCIAL STATISTICS.

'ensus was begun by the. Commission in enditures for freight on each route at the ost of transporting the same amount of ailing before the road was constructed, a i represents the economic saving to the
e construction of the particular route in
ing for all the routes built by the Comtable for 1911, 1912, and 1913, has been.


From this table it will be seen that the saving in these three years alone was almost three times the total expenditure for roads. to the end of 1913. Records for succeeding years were burned up in the fire of 1915. No census was taken during the war.

A new census was inaugurated Jan. 1, 1921.
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.

During the opening of new diggings in the Chisana region a few years ago, beans, coffee, sugar, hay, candles, bacon, grain, etc., were sold at $\$ 1.50$ per pound. The freight charges were almost a dollar a pound, so that the original cost of the article was of relatively little importance. And even at that, the supply could not keep pace with the demand. Last summer the freight charges. for transporting supplies from Dawson, in the Klondike, to some mines about one hundred miles away in the American 40 -Mile District were greater than the original cost of the supplies plus the freight from the United States to the Klondike. (Dawson is 1,700 miles from Seattle.)

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

## Winter:

Per Ton-mile.

| Bob-sled (sled road) | \$ 0.37 |
| :---: | :---: |
| Double-ender (trail) | 1.30 |
| Dog-team (trail) | 6.30 |

Summer:

$$
\text { Truck (wagon road) ........................................................ } 0.40
$$

Wagon (wagon road)
1.23

Pack train (trail) ............................................................ 4.80

*Average from very widely varying figures. At Lisianski Inlet. in Southeastern Alaska, last summer I observed lumber. pipe, tar paper, sroslippery mountain trail about 7,500 fett long to ans from the beach up a tle basin at about 800 feet elevation long to a new gold strike in a lit-ton-over 1 cent per ton-foot.

Railroad transportation cannot yet be regarded as a usual form for Alaska, and steamship rates are entirely arbitrary, depending upon competition. They, like the existing railroad rates. hare been fixed by two factors only; 1 st, the cost of hauling on some competing wagon road, sled road, or trail, where such competition
exists (or, in the case of steamships, sometimes by competing steamer line); and 2nd, by the highest rate the freight can stand and be shipped at all.

The table shows the actual costs 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.

## ADDITIONAL OPERATIONS OF THE BOARD OR OF ITS MEMBERS.

The following additional duties have been imposer upon the members of the board 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 Board, in addition to his other duties, was appointed District Engineer; the other two members of the Board were placed under the immediate orders of the District Engineer and the Secretary and Disbursing Officer of the Board was, in addition, designated as Disbursing Officer for the district. The Alaska district does not form a part of the Northern Pacific Division; the District Engineer reports direct to the Chief of Engineers. Detailed report of the operations of the Alaska District will be found in the Annual Report, C. of E. Expenditures for the fiscal year, and to include vouchers received and placed in the account, including June 30. 1922, were $\$ 47,503.46$.
(b) By par. 3, S. O. No. 50.0, Way Department, Washington. D. C., March 9, 1921, and under the provisions of Acts of Congress approved June 17, 1910, and June 15, 1917, the President of the Board, in addition to his other duties. was detailed for consultation $o r$ to superintend the construction or repair of any aid to navigation authorized by Congress in the Sixteenth Lighthouse District (includes the Territory of Alaska) and was directed to report by letter to the Secretary of. Commerce.
(c) The President of the Board, at the request of the Comp manding Officer, Fort Wm. H. Seward, Alaska, made a special examination of the water main which supplips the post and town of Haines, Alaska. This main crosses Chilkat Inlet at the mouth of the river of the same nane The crossing is about two miles wide and the pipe-line is

## ANNUAL REPORT ALASKA ROA

subjected to the scour and unc tide as well as glacial floods i: pounding of the ice run. It has breaks which have cut off the weeks at a time.

His report and recommendati reconstruction of the line having War Department, the Board was with supervision of the work. $T$ dred and fifty dollars of Quarterm: to the post finance officer in F breaks and leaks were repaired, th and the reconstruction started las

At the close of the fiscal was practically completed. Soldi under the immediate supervision of penditures aggregated $\$ 2,505.02$.
(d) By letter of the Secretary of War, the President of the Board was Department representative upon Alaska Council. Under the autho the President of the Board design cer of the Board to act in his abse

## STATEMENT OF RECEIPTS AND

This report covers vouchers received ay including June $30,1922$.

RECEIPTS.
Balance on hand July 1, 1921 Received since from:
War warrants
Transfers from officers Refunds property. etc., Alaska Fund

## Total

DEDUCTIONS:
Deposited to credit Treasurer of United Stal balance on hand close of F. Y. 1921
Deduction of working fund
Deposited by Capt. C. S. Ward, previous ades, ets officer
sales, ete.
Net Total
DISBURSEMENTS
Dishomnod as per tabulated statement below alance on hand in Army Account of Adr: 1922 on hand in Army Account of Adr:

ANNUAL REPORT ALASKA RO

## EXPENDITURES IN DETAIL.

FEDERAL APPROPRIATIONS AND "ALASKA FUND" AND FUNDS CONTRIBUTED BY THE TERRITORY OF ALASKA AND OTHERS.

| Acrt. | Name of Route Conder | Construction | Maintenan | Total |
| :---: | :---: | :---: | :---: | :---: |
| I' | Prince of Wales lsland |  | 204.50 | \$ 204.50 |
| 2B | Mfendenhall Glacier Extension.. | 2,572,24 | 3,400.00 | 5,972.24 |
| $20^{\circ}$ | Mendenhall Glacier Bridge ...... | 482.39 |  | 482.39 |
| 2 L | Juneau-Duck Creek | 1,450.06 | 1,573.69 | 3,023.69 |
| $3 \cdot 1$ | Haines-Wells |  | 6,955.93 | 6,955.93 |
| 3 B | Pleasant Camp Extension | 12,000.00 |  | 12,000.60 |
| 3 C | Porcupint Extension | 100.00 |  | 100.00 |
| (1) | Haines-Mud Bay | 5,039.311 |  | 5,039.30 |
| $4 \mathrm{B1}$ | Valdez-Comfort |  | 10,642.03 | 10,642.03 |
| 4 B 2 | Comfort-Canyon | 10,000.04 | 2,757.38 | 12,757.38 |
| $4 \mathrm{B3}$ | lieystone Canyon | 19,922.11 |  | 19,922.10 |
| 4B4 | Canyon-W0 ortmans, first section | 9,000.00 |  | 9,000.00 |
| $4 \mathrm{B4}$ | Canyon-Wortsmans, 2 nd sec..... | 9,785.96 | 3,000.f0 | 12,585.96 |
| 485 | Wortmans-Beaver Dam |  | 3,145.04 | 3,145.14 |
| 4 BC | Beaver Dam-Ernestine |  | 8,121.24 | ¢,121.24 |
| 4 C | Ernestine-Willow Creek |  | 8,469.13 | 8,469.13 |
| 4 D | trillow Crpek-Gulkana |  | 15,130.36 | 15,130.36 |
| 4 E | Gulkana-Sourdough |  | 17,786.91 | 17,786.91 |
| 4 F | Sourdough-Mile 168 |  | 15;017.62 | 15,417.62 |
| 4 C | Mile 168-Delta Fiver (M 204).... |  | 8,897.56 | 8.897 .56 |
| $4 \mathrm{H1}$ | Delta River-Rapids .................. |  | 6,067.41 | 6,067.41 |
| 4H2 | Rapids-McCarty |  | 16,071.64 | 16,071.64 |
| $4]$ | McCarty-Richardson |  | 14,233.25 | 14,233.25 |
| 4.7 | Richardson-Salchaket |  | 17,041.80 | 17.041 .80 |
| 4IK | Salchaket-Fajrbanks, 1 st sec... |  | 15,500.00 | 15,500.00 |
| 4 k | Salchaket-Fairbanks, 2nd sec... |  | 16,553.20 | 16,553.2i |
| $45^{\circ}$ | Salchaket-Fairbanks, 3rd sec. | . ................ | 17,500.00 | 17,510.00 |
|  | Dunbar-Fort Gibbon |  | 526.44 | 526.44 |
| 6.1 | Willow Creek-Tonsina, 1st sec. |  | 13,350.00 | 13,350.611 |
| 6 A | Nillow Creek-Tonsina, 2nd sec. |  | 10,410.72 | 10,410.72 |
| 6 B | Tonsina-Chitina, 1st section.... | . ................ | 12,210.08 | 12,210.48 |
| 63 | Tonsina-Chitina, 2nd section.... |  | 10,116.00 | 10,116.00 |
| 70 | Summit-Fairbanks Creek |  | 395.00 | 395.010 |
| (1) | Ester Creek |  | 388.33 | 388.33 |
| 7 G | Fairbanks-Gilmore |  | 5.61 |  |
| 7 J | Fairbanks-Chena Hot Springs.... |  | 1,215.50 | 1,215.50 |
| ${ }_{5} \mathrm{R}$ | Goldstream-O'Connor Creek ... | 154.64 |  |  |
| St | Nome-Council |  | 22.556.79 | 22,55¢. 79 |
| 8 c | Bonanza Ferry |  | 136.09 |  |
| ${ }_{88} 8 \mathrm{C}$ | Safety Ferry .............................. | . ...............- | 386.00 | 386.00 |
| 8 C 81 | Council Ferry |  | 150.06 |  |
| $8{ }_{8}^{81}$ | Council-Ophir Creek Road |  | 1,002.56 | 1, 902.50 |
| ${ }_{9}^{81}$ | Casa De Paga |  | 758.00 | 458.(ii) |
| Fil | Rampart-Eureka |  | 45.00 |  |
| $101$ | Seward-Kenaj Lake | . ...........-.-..- | 4,731.03 | $4,731.08$ |
| 11.4 | Eagle-O'Brien |  | 4,516.62 | 4.516.6\% |
| 118 | O'Brien-Fortymile ....................... |  | +353.50 | 353.50 |
| 11. | Steel Creek-Jack Hade |  | 57.75 | 57.75 |
| 11 I | Canyon Creek-Walkers Fork |  | 500.09 | 500.00 |
| 11 F | Eagle-Seventymile |  | 500.00 | 500.00 |
| 11 F | Jack Wade-Chicken ............... |  | 300.00 | 300.00 |
| 11 G | Steel Creek-Moose Creek ......... | . | 300.00 | 30.00 |
| 11\% | Liberty Cabin-Stcel Creek ....... |  | 150.00 | 150.04 |
| 13A | Nome-Bessie |  | 2,407.74 | 2,401.02 |
| 13 B | Bessie-Banner | ............... | 1,235,02 | 1,236.94 |
| 13 C | Bessie-Little |  | 966.94 |  |
| 13 F | Nome-Osborne |  | 11,376.31 | 11,925.72 |
| 131. | Nome River |  | 925.72 | ${ }_{996.99}$ |
| 33K | Bessie-Buster |  | 996.99 | 1250.12 |
| T4. | Sitks-Indian River |  | 1,250.12 | 1,260.36 |
| 1 F | Circle-Miller House |  | 3,130.36 | 3, ${ }^{1} 2.34$ |
| 16 | Chatanika-Miller House |  | 17,872.34 | 17, ${ }_{300.00}$ |
| 17 | Fort Gibbon-Kaltag |  | 300.00 | 860.99 |
| 18 | Kaltag-Solomon |  | 860.99 | . 301.65 |
| ${ }^{196 \mathrm{E}}$ | Girdwood-Crow Creek | 391.65 | 2,000.00 | $\begin{aligned} & 2,39788 \\ & 3.497 \end{aligned}$ |
| ${ }_{-26}^{26 \%}$ | Susitna-Rainy Pass | 3,497.88 |  | $296.33$ |

## VDITURES IN DETAIL.

"TIONS AND "ALASKA FUND" AND FUNDS IE TERRITORY OF ALASKA AND OTHERS.


## EXPENDITURES IN DETAIL.-(Continted.)

| Acct. | Name of Route | Construction | Maintenance | Tota |
| :---: | :---: | :---: | :---: | :---: |
| 21 | Unalaklik-St. Michael |  | $5 \% .69$ | 5 (9.) ${ }^{\text {a }}$ |
| 22 | Hot Springs-Sullivan Creek |  | 230.37 | 230.37 |
| 23A | Chatanika-Beaver |  | 29.14 | 29.14 |
| 23 B | l Seaver-Chandlar |  | 5,1053.81 | 5.153 .81 |
| 23 C | Chandlar-Koyukuk |  | 25.90 | 25.00 |
| 23 D | Caro-Flat Creek |  | 25.94 | 25.601 |
| 23 E | Caro-Coldfoot |  | 500.100 | 500:011 |
| 24 | Mile 29 ANRR-Sunrise ..... |  | 1,281.70 | 1.291.71 |
| 24 A | Lynx Creek-Sixmile Creek .... | 396.00 |  | 396.104 |
| 24 B | Sunrise-Hope | 185.10 |  | 185.111 |
| 25- | Cripple River |  | 64.95 | 64.95 |
| 25 B | Penny River |  | 88.011 | 88.90 |
| 25 D | Mouth of Center Creek |  | 385.019 | 385.04 |
| 25E | Submarine Paystreak |  | 550.75 | 551.75 |
| 25 F | Anvil-Glacier |  | 64.80 | 6+.S11 |
| 25 G | Snake River Extension |  | 682.78 | 682.78 |
| 25 I | Sinrock Ferry |  | 382.51 | 382.51 |
| 26 | Candle-Candle Creek |  | 4.982 .61 | 4.98 .61 |
| 26A | Kugruk River Approacio |  | 488.04 | 488.111 |
| 27 | Deering-Inmachuk ..... |  | 6.371 .14 | 6.371 .14 |
| 28A | Nome-Taylor | 1,140.00 |  | 1,149.6" |
| 29 | Fort Gibbon-Koyukuk |  | 846.48 | 841.48 |
| 30 | Hot Springs Landing-Eureka. |  | $5,1001.72$ | 5.191 .12 |
| 32 A | Tacotna-Flat Creek |  | 42.51 | 42.54 |
| 32 D | Flat-Crooked Creek |  | 130.100 | 130.01 |
| 35A | Archangel Extension | 3.490 .88 |  | $\bigcirc, 490.88$ |
| 35 B | Mile 26 y-Palmer ........... | 3,942.54 | 1,006.00 | 4.942 .54 |
| 35 C | Palmer-Matanuska River |  | 1.1421 .25 | 1,021.25 |
| 35 D | Willow Creek Extension | 9.601 .20 | 10,0010.00 | 19,601.20 |
| 35 E | Wasilla-Fish Hook | 877.16 | 1), | 877.16 |
| 35 F | Wasilla-Knik |  | 781.05 | 781.05 |
| 37 | 'Topkok-Candle |  | 210.60 | 210.010 |
| 38 A | Ruby-Long Creek |  | 4,659.48 | 4.659 .48 |
| 38B | Long Creek-Cripple City |  | 706.94 | 70) 0.94 |
| 38 C | Ophir-Crippie |  | 335.25 | 335.25 |
| 38 D | Ophir-Tacotna, 1st section. | 15,000.00 | 292.42 | 15,292.42 |
| 38 D | Ophir-Tacotna. 2 nd section...... | 11,000.00 | 3.650 .001 | 14.650 .06 |
| 38 D | Ophir-Tacotra, 3rcl section....... | 9.000 .00 | 2,350,00 | 11,359.04 |
| 38 E | Solatna Bridge ...... | $3,557.27$ |  | 3,557.27 |
| 39 | Juneau-Sheep Creek |  | 1,103.74 | 1,103.7 |
| 41 | Kiana-Klery Creek |  | 237.15 | 237.15 |
| 42 | St. Michael-Kotlik |  | 270.00 | 270.114 |
| 44 A | Skagway-Smugglers Cove | 11,158.71 |  | 11,158.71 |
| 45. | Silver Bow Basin ...... |  | 299.69 | - 299.69 |
| 46A | Roosevelt-Kantishna | 8,964.09 |  | 8.964 .19 |
| 46 B | Lignite-Kantishna | 11,966.91 |  | 11,466.91 |
| 46 C | Nenana-Knights Roadhouse | 1.499 .80 |  | 1,499.80 |
| 46 E | Kuskokwim Reconnaissance | 831.75 |  | 831.75 |
| 48 | Iliamna Bay-Iliamna Lake | 4,745.93 | 903.63 | 5.643.56 |
| 49 | Davidsons Landing-Taylor |  | 1.032 .00 | 1,6132.00 |
| 51 | Talkeetna-Cache Creek, Ist section | 10,200.00 | 7,300.00 | 17,500.00 |
| 51 | Talkeetna-Cache Creek, 2nd section | 12,209.92 | 2,700.00 | 14.909.92 |
| 51 A | Upper Yentna | 901.26 | 2,700.00 | 14.901.26 |
| 53 | Eagle-Circle |  | 100.00 | 100.00 |
| 57 | McCarthy-Nizina |  | 2,853.95 | 2.853 .95 |
| 57. | Nizina Bridge ... | 8,190.33 |  | 8.190 .33 |
| $\frac{59}{62}$ | Fairbanks Bridge ...... |  | 6.40 | 8.4.40 |
| 63 | Dime Creek Corduroy |  | 14,941.80 | 14,041.80 |
| 64 | Cripple-Lewis Landing |  | 366.50 | 366.50 |
| 65 A | Gulkana-Chistochina |  | 656.00 | 656.09 |
| 65 B | Chistochina-Slate Creek ...... |  | 109.50 | 109.50 |
| 65 C | Chistochina-Tanana Crossing.... |  | 92.20 | 92.20 |
| 65 D | Ketchumstuk-Tanana Crossing |  | 72.00 | 72.00 |
| 67 A | Teller-Lost River ....................... |  | 420.00 | 420.00 |
| 68 | Wragging Trails |  | 5,363.20 | 5,363.20 |
| 73 | Marshall Road ..... | 4,964.97 | 35650 | +,964.97 |
| 73 A | Kotlik-Marshall | 850.00 | 356.50 | 356.511 850.00 |
| 73 B | Stuyahok Trail | 660.00 |  | 800.09 660.00 |
| 5 | Anchorage-Eagle River ............... | 8,446.07 |  | 8.446 .07 |

EXPENDITURES IN DETAIL.-(Continued.).

| Acct. | Name of Route | Construction | Maintenance | Total |
| :---: | :---: | :---: | :---: | :---: |
| 76 | Govt. Railroad-Valdez Creek.. | - 1,139.58 |  | 1,139.58 |
| 77 | Shelton Ferries |  | 300.00 | 300.00 |
| 77 A | Gerries |  | 466.79 | 466.79 |
| 77 B | Bull Creek Bridge |  | 45.00 | 45.00 |
| 78 | Valdez Depot ...... |  | 1,036.20 | 1,036.20 |
| 79 | Seward Depot |  | 3,148.89 | 3,148.89 |
| 81 | Good Creek-Salmon River | 362.39 | 3,148.89 | 362.39 |
| 82 | Taku Reconnaissance | 899.21 | ................. | 899.21 |
| 83 | Talkeetna-Iron Creek | 273.50 |  | 273.50 |
| 86 | Nation | 560.75 | -............... | 560.75 |
| 87 | Woodchopper Creek | 62.00 |  | 62.00 |
| 88 | Govt. Railroad-Moose Creek | 499.69 | ...--............ | $49 ¢ .69$ |
| 89 | Kougarok Reconnaissance | 3,984.66 | ................. | 3,984.66 |
| 90 B | Shelter Cabins, 2nd Division... | 1,500.00 | ....-............. | 1,500.00 |
| 90 C | Shelter Cabins, 3rd Division... | - 1,200.00 |  | 1,200.00 |
| 91 | Yakutat | 50.55 |  | 50.55 |
| 92A | Bethel-Quinhagak | 11.50 |  | 11.50 |
| 92 B | Bethel-Aliak ..... | 783.48 |  | 783.48 |
| 95 | Alaska Peninsula Reconnais. | 573.20 |  | 573.20 |
| 100 | Office | 6,910.04 | 13,820.08 | 20,730.12 |
|  | Totals | \$236,216.91 | \$447,030.77 | \$683,247.68 |

## EXPENDITURES IN DETAIL-COOPERATIVE FUND.

(Included in preceding Table.)
FIRST DIVISION.

| Acct.$\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 3 \\ & 3 \mathrm{D} \end{aligned}$ | Name of Route | Federal | Territorial | Total |
| :---: | :---: | :---: | :---: | :---: |
|  | Pr. of Wales Is. Portage...... \$ | 204.50 | 0.00 | \$ 204.50 |
|  | Juneau System .................... | 10,881.75 | 0.00 | 10,881.75 |
|  | Haines-Pleasant Camp | 17,086.94 | 1,968.99 | 19,055.93 |
|  | Haines-Mud Bay ............ | 39.30 | 5,000.00 | E,039.30 |
| 14 | Sitka-Tndian River .............. | 0.00 | 500.00a | 500.00 |
|  | Skagway-Smugglers' Cove.. | 9,194.96 | 1,963.75b | 11,158.71 |
| 7281 | Wrangell-Oil Dock | 2,964.97 | $2,000.00 \mathrm{c}$ | 4,964.97 |
|  | Strawberry Point | 62.39 | 300.00 | $\begin{array}{r}362.39 \\ 605 \\ \hline\end{array}$ |
| 91 | Yakutat | 43.73 | 6.82 | 50.55 |
|  | Totals | 40,478.54 | \$ 11,739.56 | \$ $52,218.10$ |
| SECOND DIVISION. |  |  |  |  |
| Acct. | Name of Route | Federal | Territorial | Total |
| 8 | Nome-Council ...................... \$ | 8,991.42d | \$ 15,325.87 | \$ 24,317.29 |
| 8\&25 | Ferries | 1.491 .79 | 374.50 | 1.,866.29 |
| 13 \& 25 | Nome Locals | 10,847.06 | 7,289.44 | 18,136.50 |
| 131 | Norne River Extension ..... | 363.97 | 561.75 | 925.72 |
| 18 | Kaltas-Solomon | 860.99 | 0.00 | 860.99 |
| 21 | Unalakleet-St. Michael ....... | 50.00 | 0.00 | 50.00 |
| 25 G | Snake River Extension ....... | 682.78 | 0.00 | 682.78 |
| 26 | Candle-Candle Creek ..........- | 4,941.49e | 529.12 | 5.470 .61 |
| 27 | Deering-Inmachuk .............. | 371.04 | 6,000.00 | 6,371.04 |
| 28 | Dahl Creek-Candle | 1,140.00 | 0.00 |  |
| 37 | Topkok-Candle | 210.00 | 0.00 | ${ }_{237} 215$ |
| 41 | Kiana-Klery Creek ............... | 237.15 | 0.00 |  |
| 42 | St. Michael-Kotlik | 270.00 | $\begin{array}{r}0.00 \\ \hline 0000\end{array}$ | - $\begin{array}{r}270.032 .00\end{array}$ |
| 49 | Davidson's Landing-Taylor | 32.00 7.680 .51 | $1,000.00$ $6,361.29$ | 14,041.80 |
| 67 | Nome-Prince of wales ......... | \% 420.00 | -0.00 | ${ }^{1} 420.00$ |
| 68 | Flagging Winter Trails ....- | 4,657.20 | 706.00 | 5,363.20 |
| 73 | Marshall-Kotlik | 1.510 .00 f | 356.50 | 1,866.56 |
| 89 B | Some-Keewalik Recont | 3,984.66 | 0.00 | $3,984.00$ |
| 90 B | Shelter Cabins | 0.00 | 1,500.00 |  |
|  | Totals ..................................... ${ }^{\text {\$ }}$ | 48,742.196 | \$ 40,004.47 | \$ 88,746.5 |

THIRD DIVISION

| Acct. | Name of Route | Feder: |
| :---: | :---: | :---: |
| $\begin{aligned} & 10 \\ & 20 \\ & 51 \\ & 57 \\ & 60 \\ & 90 \mathrm{C} \end{aligned}$ | Seward-Kenaj Lake .......... | 31,i. |
|  | Rainy Pass Trail ........... | 1,794.2 |
|  | Talkeetna-Cache Creek | 18,821. |
|  | McCarthy-Nizina | 6,044. |
|  | Valdez Dike | 0.0 |
|  | Shelter Cabins | 0.0 |
|  | Totals | 31,390.8i |
|  | FOURTH D | VISION |
| cet. | Name of Route | Federal |
| 7 | Fairbanks Local Roads ...... \$ | 2,159.08 |
| $1{ }^{9}$ | Rampart-Eureka | 45.0 |
| 11 | Eagle-Fortymile | 6,677.8: |
| 15 | Circle-Miller House | 3,130.36 |
| 16 | Chatanika-Miller House | 17,872.34 |
| 22 | Hot Springs-Sullivan .... | 230.37 |
| 30 | Hot Springs LandingEureka |  |
| $\begin{aligned} & 38 \mathrm{~A} \\ & 38 \mathrm{~L} \\ & 46 \\ & 63 \\ & 92 \end{aligned}$ | Rubr-Long | 4,659.48 |
|  | Ophir-Tacotna | 38,222.80 |
|  | Roosevelt-Kantishna-R.R. .. | 20,663.98 |
|  | Brooks-Dunbar | 366.5 (1) |
|  | Bethel Trails | 294.98 |
|  | Totals |  |

## SUMMARY

|  |  | Federal |
| :---: | :---: | :---: |
| First Division Second Division Third Division Fourth Division |  | 40,478.54 |
|  |  | 48,742.06 |
|  |  | 31,390.87 |
| Grand | Totals |  |

a-Contributed by City of Sitka.
b-Inclures $\$ 463.75$ from Alpine Club of Skag c-Tncluds $\$ 500.00$ from City of Wrangell.
d-Includies Council Local Roads.
e-Includes Kugruk River Approach.
f-Includes Stuyahok Trail.
g-Contributed by City of Valdez.
h-Exclusive of $\$ 7.812 .19$ expended by Divis
on Anchorage and Matanuska Local $R$. i-Includes belated bills from previous year': j-Exclusive of $\$ 21,324.25$ expended by Divisi On Fairbanks Local Roads.

IS IN DETAIL.-(Continued.).

| Construction |  | Maintenance | Total |
| :---: | :---: | :---: | :---: |
| ez Creek.... | 1,139.58 |  | 1,139.58 |
|  |  | 300.00 466.79 | 300.00 |
|  | ............... | 45.00 | 466.79 45.00 |
|  |  | 1,036.20 | 1,036.20 |
|  |  | 3,148.89 | 3,148.89 |
| River ....... | 362.39 | ........ | -362.39 |
| ze ...............- | 899.21 | ................. | 899.21 |
| is. ................ | 273.50 560 | .............. | 273.50 560.75 |
|  | 62.00 | ....-............. | 56.75 62.00 |
| je Creek .... | 499.69 | ................. | 499.69 |
| ssance | 3,984.66 | ................- | 3,984.66 |
| 1 Division... | 1,500.00 | ...-............. | 1,500.09 |
| 1 Division.... | 1,200.00 | . | 1,200.00 |
|  | 50.55 11.50 | ....... | 50.55 11.50 |
|  | 783.48 |  | 783.48 |
| :econnais...... | 573.29 |  | 573.20 |
|  | 6,910.04 | 13,820.08 | 20,730.12 |
|  | 236,216.91 | \$447,030.77 | \$683,247.68 |

## ^ DETAIL-COOPERATIVE FUND.

uded in preceding Table.)

## FIRST DIVISION.

| Route | Federal | Territorial | Total |
| :---: | :---: | :---: | :---: |
| 3. Portage..... \$ | 204.50 | 0.00 | 204.50 |
|  | 10,881.75 | 0.00 | 10,881.75 |
| t Camp ........ | 17,086.94 | 1,968.99 | 1.9,055.93 |
| ay .-............. | 39.30 | 5,000.00 | -,039.30 |
| iver, ............. | ${ }^{19.00}$ | 1,963.75 ${ }^{5}$ | 11,158.71 |
| Jers Cove. | 2,964.97 | $2,000.00 \mathrm{c}$ | 4,964.97 |
|  | 62.39 | 300.00 | 362.39 |
|  | 43.73 | 6.82 | 50.55 |
|  | 40,478.54 | \$ 11,739.56 | \$ 52,218.10 |
| SECOND DIVISION. |  |  |  |
| f. Route | Federal | Territorial | Total |
|  | 8,991.42d | \$ $15,325.87$ | \$ 24,317.29 |
| ..........................- | 1,491.79 | 374.50 | 1.,866.29 |
|  | 10,847.06 | 7,289.44 | 18,136.50 |
| xtension | ${ }^{363.97}$ | 561.75 | 860.99 |
| Michael .......... | 860.99 50.00 | 0.00 | 50.00 |
|  | 682.78 | 0.00 | 682.78 |
| xtension ........ | 4,941.49e | 529.12 | 5,470.61 |
| $\begin{aligned} & \text { Creek --............. } \\ & \text { nuk ............. } \\ & \text { ndle } \end{aligned}$ | 371.04 | 6,000.00 | 6,371.04 |
|  | 1,140.00 | 0.00 | 1,140.00 |
| reek .and....... | 210.00 | 0.00 | 21.00 |
| tlik ................ | 237.15 | 1.00 | 270.00 |
|  | 270.00 3200 | 1,000.00 | 1,032.09 |
| nding-Taylor rduroy $\qquad$ | 7,680.51 | 6,361.29 | 14,041.80 |
| t Wales ........ | 7,420.00 | 0.00 | 420.00 |
| r Trails ...... | 4,657.20 | 706.00 | 5,363.20 |
|  | 1.510 .00 f | 356.50 | 1,866.50 |
| k Recon. .-.... | 3,984.66 | 0.00 1500.00 | $3,984.66$ 1.500 .00 |
| э |  |  |  |
|  | \$48,742.06 | \$ 40,004.47 | \$ 88,746.53 |

## THIRD DIVISION.



## FOURTH DIVISION.



a-Contributed by City of Sitka.
b-Inclucles $\$ 463.75$ from Alpine Club of Skagway
c-Includs $\$ 500.00$ from City of Wrangell.
d-Includes Council Local Roads,
e-Includes Kugruk River Approach.
f-Includes Stuyahok Trail.
5-Contributed by City of Valdez.
h -Exclusive of $\$ 7.812 .19$ expended by Divisional Commission, mainly on Anchorage and Matanuska Local Roads.
i-Includes belated bills from previous year's agreements.
j-Exclusive of $\$ 21,324.25$ expended by Divisional Commission, mainly
on Fairbanks Local Roads

## CONTRIBUTED FUNDS.

ESS APPROVED JUNE 30, 1921, ALASKA SPECIAL FUND

Ipproved April 21, 1919.

## Trails and Ferries.

$. \$ 115,517.94$ 85,746.61

Roads, elc....



Nizina River Bridge

| Shelter Cabins |  |
| :---: | :---: |
|  | 6,500,90 |


III. EXPENDITURE OF OTHER FUNDS SUPERVISED BY THE BOARD.
. For the Territory of Alaska:

lecount


CHAIRMAN, 4TH DIVISION $\qquad$ Account

| $\begin{aligned} & \text { Accou } \\ & \text { No. } \end{aligned}$ | Name | Miles | Expenditure |
| :---: | :---: | :---: | :---: |
|  | Overhead |  | \$ 65.00 |
| 7 A | Summit-Chatanika | 11 | - 525.01) |
| 7 B | Fox-Olnes | 13 | 230.00 |
| 7 D | Fairbanks-Ester Creek | 13 | 2.916.30 |
| 76 | Fairbanks-Gilmore | 13 | 3.890 .90 |
| ${ }_{7} \mathrm{H}$ | Little Eldorado Creek | 11\% | 336.00 |
| 71 | Gilmore-summit | $6{ }^{2}$ | 2,965.32 |
| 7 J | Fairbanks-Chena H. S. | 64 | 1,052.35 |
| 7K | Olnes-Livengood | 54 | 1,221.25 |
| 7N | Farmers Birch Hill | $61 / 2$ | 4,814.89 |
| TS | Graehl Bridge ......... | , | +105.97 |
| 15 A | Central H.-Circle H. S. | 9 | 620.519 |
| 30 | H. S. Landing-Eureka | 24 | 1,147.36 |
| 46 A | Roosevelt-Kantishna | 34 | , 655.113 |
| 63 | Dunbar-Brooks | 63 | 1,778.38 |
|  | Total |  | \$21,324.25 |
|  | Balance |  | 675.75 |
|  | Total Allotted |  | \$22,000.00 |

2. For the Quartermaster Generai, U. S. Army:

Fort William H. Seward water supply Distributed as follows:

| Lumber | - 16.10 |
| :---: | :---: |
| Piling | $\pm 29.00$ |
| Pile Points | 150.00 |
| Gas Boat | 240.00 |
| Fuel and Repairs | 52.65 |
| Pipe, Fittings, and Misc. Hdwe. | 1,614.27 |
| Total | 2,502.02 |

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

Rivers and Harbors, Fish Traps, etc.
347.513 .44 Distributed as follows:

Improvement of Nome Harbor ..................................... $\$ 38,010.96$

Survey of Wrangell Narrows
Investigation of Port Facilities
Fish Traps Public Hearinos
Increased compensation $1921-22$
2,931.27
Increased Compensation 1921-22................................ 5,345.86
Total $\qquad$
Total supervised funds (1922)
\$47,503.46


