

stock of repair parts and replacement units must necessarily be quite large and highly diversified with correspondingly large investment and requirements for storage space. Some of the shops are provided with excellent machine tools, obtained at little or no cost from military surplus, so that when the necessary materials and craftsmen are available many of the needed parts can be made at the site.

The Alaska Road Commission, as a matter of policy that is being continued, used commercial facilities for the purchase of repair parts just as far as the commercial facilities could stock them. For example, the Northern Commercial Company, the distributor for Caterpillar in the Territory, worked very closely with the Alaska Road Commission in the stocking of parts. For a number of years all frequently used Caterpillar parts have been bought through this company rather than stocked in Alaska Road Commission warehouses. Also such things as tires and batteries have been purchased in the Anchorage and Fairbanks areas from commercial sources rather than being ordered through USA. These practices have reduced ARC inventories by sizeable amounts.

The extremely cold weather, as much as -70°F ., that prevails during the winter in some areas, makes it essential that extra storage be provided for the working equipment throughout the winter months. Extra storage space is required for snow removal equipment that may be needed at any time on short notice. Extra storage space and working space for overhaul is required for the equipment not used during the winter.

Most of the mobile construction and maintenance equipment now owned by the Bureau in Alaska was purchased new. Nearly all of the shop equipment and specially items, such as cranes and snow plows, have been acquired by transfer from the military agencies after becoming excess to their needs. Some of the smaller isolated cranes like Mono and Lullak, also were equipped extensively from military surpluses. Some of the equipment obtained by transfer was well worn or otherwise not in good condition when obtained and has required extensive overhaul and repair. In addition, the units obtained were for obvious reasons of diverse makes, models and sizes, some of which were, or soon became, obsolete. It is understood that despite the extremely large and important snow removal program, including such undertakings as removing 10 feet of snow from Thompson Park, the Alaska Road Commission has never had a new rotary snow plow.

Because of limited funds, budgetary restrictions, and other reasons, it has been difficult to obtain the quantities and kinds of equipment best suited to the work and conditions when needed. It has generally been necessary to eliminate about half of the items from the requisitions for new equipment that district engineers have

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submitted each year. These conditions have prevented long-range planning and procurement on the basis of actual need and economy. Instead, it has been necessary to operate on a basis of a "make-do" basis. As a result some equipment units have been repaired and kept in service considerably beyond their economical lives.

Much of the heavy equipment now on hand was obtained for use on force account construction. It is planned to substitute the contract method for the force account method of construction to the maximum extent feasible and economical. As a result some of this equipment may no longer be needed for construction but is too large and cumbersome to be adapted to ordinary maintenance work. No new heavy construction equipment has been purchased for about five years and consequently, most of that now on hand is fast approaching a worn-out condition. Any units not needed should be declared excess or be surveyed off the records according to their condition.

It is recommended that a comprehensive and detailed study be made of the entire situation in Region 13, with respect to equipment and shops. The study should include the following phases:

1. A complete inventory of all presently owned construction and maintenance equipment and a thorough inspection of all such equipment by a competent equipment specialist to ascertain: (1) its present condition, (2) estimated cost of repairs and overhaul to put and maintain it in satisfactory condition for use, (3) estimated further service life, and (4) the advisability of retaining it in service or disposing of it. A very comprehensive inventory of the construction and maintenance equipment has already been made and Mr. Stewart, of the regional office staff, and the various district mechanics have a very intimate knowledge of the condition of the individual units of equipment.

2. A complete inventory of all repair parts and replacement units now in stock at the various shops and camps. It has been the practice to periodically examine parts and replacement unit inventories and to call them excess to needs. Most of the districts hold one or two sales a year for the purpose of disposing of excess items. Region 13 has an inventory of the parts and replacement units now on hand.

3. An inspection of all shop, storage and living quarters facilities to determine their adequacy and the need for providing new facilities and for expanding, remodeling or reconditioning existing facilities. This should include a study of all shop equipment, machinery and tools. Such an inspection is under way at this time with a view toward determining a priority list for improvement or replacement.

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4. A long-range engineering study and planning of anticipated future construction and maintenance programs, and on the basis thereof, a determination of immediate and long-range requirements for equipment and facilities. One of the questions involved here is that of the extent to which funds account construction of pioneer roads on the Federal-aid system, of farm roads for the Territory, and of development roads for the Forest Service, is to continue. Some of the pros and cons of this question will be discussed in a separate memorandum.

5. Investigation of the availability of commercial facilities for providing parts, replacement units and shop services. It is understood that about everything is already being done that can be done toward utilization of existing commercial facilities for parts and shop services. As fast as adequate parts inventories or shop services become available from commercial sources, the corresponding operations or stocking by the Bureau are discontinued. However, the study should not be limited to existing facilities but should include discussions and appraisal of the desirability of encouraging the development of additional commercial facilities.

6. The possibilities of concentrating on a minimum of makes, models and sizes of equipment when procuring new units should be explored in order to reduce the parts problems and the training of operators and mechanics. In addition the practice now in effect to some extent in the field of concentrating certain makes, models and sizes of equipment in certain localities should be continued to minimize the parts and training problems and permit "cannibalizing" of parts in emergencies. The Alaska Road Commission was beginning to achieve a fair amount of standardization in equipment makes and models but had a very difficult time in so doing. This standardization has been upset in the recent purchases made since Public Roads took over, and the upsetting will have a serious effect on the operations, particularly with respect to heavy duty graders and similar equipment. The basic problem, of course, is the competitive bidding requirements for Government procurement, but the special conditions in Alaska might provide sufficient justification for exceptions from the generally applicable laws and regulations.

The field work involved in this proposed comprehensive study should no doubt be done by Region 10 personnel if sufficient competent people are available, or can be furnished to accomplish it. Assistance from the Washington office in the planning and over-all direction of the program should be provided and the findings and recommendations should be reviewed and approved here. Representatives of the Washington office should make sufficient field investigations and contacts to be in a position to intelligently review and act upon the findings and recommendations when received from the field.

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From the above discussion, it will be evident that much of the work required for the study has already been done by Region 10 or is being done on a continuing basis. What is needed now is for Region 10 to assemble whatever additional factual data are required and then prepare a comprehensive report of the findings and recommendations. The report should then be reviewed in this office and, after discussion with Region 10 personnel, the necessary decisions should be made to develop and put into effect a planned long-range and systematic program for providing the equipment and facilities required to take care of the needs in the most satisfactory and economical manner.

It is Public Roads' objective, of course, to get the Territory to establish an adequate and effective highway department as soon as possible and then have that department take over the Federal-aid construction and maintenance activities as rapidly as it is in a position to do so. When this objective is accomplished, which will no doubt be a gradual rather than a sudden process, Public Roads will no longer have need for most of the equipment and facilities. This should not mean, however, that anything done now should be considered as a temporary expedient. Instead, every reasonable effort should be made to build up a well-planned, well-equipped, well-staffed, efficient and effective construction and maintenance organization and plant that can be transferred to the territorial highway department as a going concern that can readily continue to operate under new management to accomplish the desired results in a satisfactory, economical and uninterrupted manner.

Mr. Swick reports to submit early in September a requisition for several hundred thousand dollars worth of new maintenance equipment (no construction equipment). Action on this requisition should not be delayed pending the comprehensive study. Instead, if the requisition is reasonable and funds are available, prompt approval should be given and early action taken toward procurement to make certain that the equipment will be actually available for shipment on the first boat to Alaska in the spring. If shipment should be delayed to a later boat, much of the short working season will be lost. It is believed that the requisition should be submitted to the Construction and Maintenance Division for consideration as to reasonableness in connection with anticipated work programs and especially because of the information we have already gained regarding the equipment situation and needs in Alaska.

WBC:Christensen:lnc
cc - Mr. Swick
Mr. Palmer
Mr. Christensen
Mr. Williams
Mr. Eshart ✓

Alaska (General)



DEPARTMENT OF COMMERCE
PUBLIC ROADS

E. J. Martin
June 12, 1957
CAJ

WASHINGTON, D. C., AUGUST 12, 1957

E. H. SWICK
PUBLIC ROADS
JUNEAU, ALASKA

ADVISE BY TELETYPE AMOUNT FOREST HIGHWAY OBLIGATIONAL AUTHORITY RELEASE
NEEDED FOR MAINTENANCE TO DECEMBER 31, 1957.

E. J. MARTIN

RECEIVED
AUG 13 1957
U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

EJMartin:rsg
cc: Mr. P. F. Royster ✓
Chron. File

U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
AUG 15 11 20 AM '57
OFFICE OF THE FEDERAL
HIGHWAY ADMINISTRATION

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Alaska (Banks) Serv.
See Park of Parkway Admin. Book
for covering memo of 8/12/57
to Surick

August 7, 1957

Mr. Paul F. Royster
Acting Assistant Commissioner for Operations
Bureau of Public Roads
Washington 25, D. C.

Dear Mr. Royster:

In conformity with Section 107 of the Federal Aid Highway Act of 1956, which provides for the transfer of the functions of the former Alaska Roads Commission to the Bureau of Public Roads, hereafter the PS&S funds for road projects in the Alaskan areas administered by the Service will be allotted to your Bureau. In this connection, our Region Four Office informs us that they will have an unobligated balance of \$35,144 of prior year PS&S funds available for transfer. This amount will be in addition to the PS&S funds to be provided for work proposed by the 1958 fiscal year program. The \$35,144 will cover the \$30,000 recently requested by representatives of your Bureau to cover surveys on the 21-30 mile section of the Mount McKinley Park road this summer.

1957 and 1958

The \$35,144 will be allotted to you in the near future.

Sincerely yours,

(Sgd.) E. T. Scoyen

E. T. Scoyen
Associate Director

10-3-57

copy to Shimada

Original filed Alaska Service Admin. Book.

X Travel Book ✓
 Alaska General

Mr. G. M. Williams

August 6, 1957

M. B. Christensen

Alaska Trips of Messrs. Christensen, Palmer and Wall
 (Highway Status and Design and Construction Problems)

During the period from July 4 to July 19, inclusive, Mr. J. L. Palmer of the Maintenance Branch, Mr. J. H. Wall of the Construction Administration Branch, and I made a trip to Region 10 to inspect the roads, visit the offices, shops and camps, and discuss Alaska road problems with Public Roads personnel and others. Although the primary purpose of the trip was to consider construction and maintenance matters, many other phases of the Region 10 activities were observed and discussed. The trip was timed, at Mr. Swick's suggestion, to coincide with a territory-wide trip that he and Mr. Niemi were making for similar purposes.

Attached are separate reports prepared by Messrs. Palmer and Wall. These reports are supplemented to some extent by comments below. In addition, I have submitted a number of separate reports covering in considerable detail some of the features and problems observed and discussed on the trip. Similar separate reports covering other features and problems will follow soon.

Mr. Palmer's report lists the principal highways over which he and Mr. Wall traveled. With the exception of the Alaska, Taylor and Nabesna highways, the Tok Cutoff of the Glenn Highway, and part of the Edgerton Highway, I traveled over the same mileage. While they were going over this excepted mileage, I went to Nome with Messrs. Swick and Niemi where we drove over the travelable mileage on the route northwest of Nome toward Teller and as far as Solomon on the road east of Nome, including the two ferries. Messrs. Swick and Niemi went to Kodiak Island also but those of us from Washington spent the time traveling from Valdez to Anchorage and going over secondary roads in the Matanuska Valley near Palmer. Messrs. Palmer, Wall and I also went over most of the Glacier and Douglas Forest highways and many of the other roads that could be reached by car from Juneau.

We did not see the Denali Highway, the portion of the Richardson Highway between the Denali and Gakona, the Haines Cutoff, the Copper River Highway, a number of the forest highways in the Panhandle, and a considerable part of the secondary road mileage. Nevertheless, it is believed we did travel practically all of the most important roads and a sufficient mileage of the remainder to get a good understanding of the highway situation and problems in Alaska.

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J. M. W.
 8/10/57

Mr. Palmer and Mr. Wall both mention the lack of shoulders on the main highways. These highways were originally designed to have a 20-foot bituminous surface with a 2-foot shoulder on each side. The surfacing was actually placed over the entire 24-foot width, however, thus leaving no shoulders. It is, of course, desirable to build adequate shoulders as soon as funds can be made available for the purpose.

With respect to the gravel and earth roads, it should be noted that the natural material over most of interior Alaska is silt with occasional areas of gravel. There is practically no clay or other natural binder available. Much of the gravel is located in river valleys that have been dredged so that the gravel has been washed clean. Most of the existing gravel and earth roads have been built by the force account method and the Alaska Road Commission had no crushing or screening equipment available, consequently, these roads consist largely of silt roadbeds covered with pitrun gravel with considerable oversize and little or no binder. Furthermore, much of the mileage of these roads lies in localities where permafrost is only a few inches under the surface of the natural ground.

It should be understood that the gravel and earth roads are in general located in areas that are largely uninhabited and that they were built primarily to provide access for mining operations or to open up the territory for homesteading or recreational purposes. Traffic is light but increasing. Bituminous treatment or surfacing of some kind would be desirable to preserve the roadbed and gravel and to keep down the dust, but nevertheless, the roads in their present condition are serving their intended purpose reasonably well. In considering the design of roads in Alaska, other than the main highways, recognition must be given to the above conditions and to the fact that funds are very limited and the mileages to be improved or initially constructed are great. Another factor to consider is that all asphalt must be hauled by boat from the States and then transported long distances inland by truck so that costs are high.

The main highways are generally in good condition and reasonably adequate to provide for traffic needs, although, as described by Messrs. Palmer and Wall, there are some deficiencies and other conditions in need of improvement. A seventy-mile section of the Alaska Highway extending westerly from the Canadian border remains to be bituminous surfaced and a few substandard bridges are in need of replacement. The sections of the Alaska and Richardson highways that have become distorted because of permafrost conditions, inadequate drainage, or lack of reconstruction to adequate standards before surfacing should be rebuilt or improved soon.

An undesirable feature not mentioned by either Mr. Palmer or Mr. Wall is the unsightly condition existing along the roadside on many sections of the highways as a result of the general practice of merely pushing the clearing and grubbing debris into the trees or into a windrow along the outer edges of the cleared areas. The difficulties involved in disposing of the trees, brush and stumps by burning are recognized. There is no apparent reason,

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however, why the unsightly piles of trees, brush, stumps, boulders and dirt could not have been leveled off and placed in a much more presentable condition at relatively little cost. The condition will be improved eventually by becoming overgrown with vegetation but is quite unattractive during the intervening two or three years. It is recommended that on future construction provision be made for cleaning up and otherwise improving the roadside to whatever extent is reasonable. It may be feasible for maintenance crews to do some improvement of the roadsides along the existing roads.

It is proposed to reconstruct to a four-lane standard the first six miles of the Richardson Highway at the Fairbanks end to meet traffic needs. This will involve some difficult right-of-way problems within and approaching the city. The most desirable location would pass over lands within the Alaska Communication Facilities reservation and it is questionable whether this right-of-way can be obtained without extreme difficulty, if at all. Difficult location and right-of-way problems also exist at Anchorage and Juneau with respect to the primary Federal-aid routes. In fact, there is no readily apparent way to locate and construct a highway to reasonably adequate standards through Juneau without destroying much of the town.

Unusually favorable weather for highway construction had prevailed in Alaska this year up to the time we left. As a result, nearly all construction was considerably ahead of anticipated schedule. Such rapid progress had been made on bituminous surfacing operations that the supply of asphalt at the Valdez tank farm had become exhausted. A tanker bringing another load from the States was due to arrive about July 20. In the meantime asphalt was being hauled from Anchorage to continue the work.

Insofar as Mr. Palmer, Mr. Wall and I are concerned, the trip to Alaska and time spent there are considered to be very much worthwhile and a wealth of information was gained that should be very helpful to all Washington office personnel concerned with Alaska activities. In addition it is believed that some contributions were made that will be helpful to the personnel of Region 10.

We were very favorably impressed by the Region 10 personnel with whom we had contact, which included practically all of those in key positions and a number of lower grade employees. We were particularly impressed with the excellent detailed knowledge and understanding of the situation and problems in Alaska that Mr. Swick had gained during his few weeks assignment there.

Attachment

MBChristensen:lmc

cc - Mr. Swick

Mr. Erhart

Mr. Christensen

Mr. Willia ms