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FINAL REPORT

MOTOR TRANSPORT AND MAINTENANCE SECTION

Washington Office - by UTz

The relocation centers operated by the War Relocation Authority depended no less on motorized transportation than does any other community in the country. A quick look at the locations selected for these centers, particularly the early selections, will indicate their isolation and lack of public facilities for both passenger and freight transportation.

Manzanar in the Owens Valley in California is 10 miles from the nearest freight railhead and 125 miles from the nearest rail passenger station. The Colorado River Relocation Center located on the Colorado River Indian Reservation in Arizona is 18 to 23 miles from both freight and passenger railhead. The Gila River Relocation Center located on the Pima Indian Reservation in Arizona is 14 miles from the nearest freight railhead and 18 miles from the nearest passenger station. The Central Utah Relocation Center located in the Sevier Valley in Utah is 15 miles from the nearest freight and passenger rail station. The Minidoka Relocation Center located in south central Idaho is 5 miles from the nearest freight railhead and approximately 30 miles from the nearest main line passenger station. The Granada Relocation Center is located about $1\frac{1}{2}$ miles from both freight and passenger railhead. The Heart Mountain Relocation Center located in northwestern Wyoming was built on a freight rail line but at a distance of about 28 miles from the nearest passenger rail station. The Tule Lake Center in extreme northern California was built immediately adjacent to freight line facilities but approximately 40

miles from the nearest accessible passenger railroad station. The Rohwer Relocation Center located in the Delta area of Arkansas is on a branch freight line which also provided limited passenger service but is 12 miles from the nearest main line passenger station. The Jerome Relocation Center also in the Delta area of Arkansas had about the same freight facilities but was located approximately 9 miles from the nearest main line passenger station. These facts emphasize the isolated location of most of the relocation centers.

In addition, certain of the centers, particularly Colorado River, Heart Mountain, Minidoka and Gila River were located in undeveloped areas where it was necessary to construct access roads as well as the other facilities required for center operation. All of the materials, supplies and equipment for the care and feeding of 8,000 to 20,000 people per center had to be transported from the railheads to the relocation centers during their entire period of occupancy except for such food supplies as were grown on the project areas.

An additional factor which contributed to the large demand for transportation equipment was the internal organization and facilities available on each of the centers. All of the evacuees were fed in central mess halls located in each block. Food and other supplies were stored in warehouses and had to be distributed daily to all parts of the center.

Since the basic construction on each of the centers was limited to housing, mess facilities, storage warehouses and utilities it was necessary to carry on a rather sizable construction program to provide

such facilities as staff housing, schools, office buildings, garages, and similar required buildings. All of the supplies and materials were transported from the railhead to the warehouses and, as construction progressed, to each of the construction sites. On all but three of the centers it was necessary to develop lands which were to be used for agricultural purposes. The Colorado River, Heart Mountain, Minidoka and Manzanar irrigation systems had to either be built or improved in order to supply irrigation water for the production of agricultural crops. It was also necessary to clear the lands of native vegetation and to level and otherwise prepare the lands for agricultural use. At Rohwer and Jerome it was necessary to clear the lands of trees, to remove stumps, and to install a drainage system before the lands could be used for the production of subsistence crops for center consumption. All of these activities required a considerable quantity of motorized equipment in order to make the areas usable.

The operation of large acreages for the production of food for the evacuees and feed for livestock required sizable quantities of motorized equipment for land preparation, planning and harvesting of the various crops. In addition, considerable transportation was required to haul workers to and from the construction and development jobs as well as from the fields adjacent to the project on which the agricultural crops were produced. Thus, the amount of motorized equipment required for the operation of the relocation centers was large and diverse.

Due to the fact that all available new motorized equipment was being used in the prosecution of the war, the Authority was able to secure only used equipment that was either obsolete or in too poor a condition for military purposes. The first equipment secured by the Authority was a group of 200 vehicles assigned on April 4, 1942 through the Army Quartermaster Corps. These vehicles were largely CCC surplus equipment or WPA surplus equipment. Some other used vehicles that had been taken over by the War Department from evacuees who were located in the centers were also supplied. On April 16, 1942 a second group of 200 vehicles from the same sources were secured. Comparatively few new trucks or passenger cars were secured during the entire program. Most of the trucks were 1935 to 1939 models that had received hard usage and for the most part were in extremely poor condition.

As the centers were completed and populated additional equipment of much the same character was made available by the War Department to the Authority. Heavy tractors, largely of the caterpillar type, were also provided from CCC surpluses and other comparable sources. Very few wheel tractors to be used for agricultural production could be secured from surplus supplies. Consequently, it was necessary for the Authority to purchase a considerable number of new and used tractors of this type for the carrying out of its farm production program.

In addition to passenger cars the Authority was furnished pick-up trucks, stake body trucks, cargo trucks, dump trucks, panels and a limited number of semi-trailer type trucks. For construction and agricultural purposes wheel tractors, crawler type tractors, motor patrols and draglines were the principal items of equipment required. A total of 1943 vehicles were used for transportation purposes together with 465 pieces of heavy motorized equipment such as tractors, draglines, motor patrols, etc.

As mentioned above only the basic requirements were constructed on the various centers under the supervision of the U. S. Corps of Engineers. No facilities for the maintenance and care of automotive equipment were included in the basic construction. Likewise no tools and equipment were provided for the care, maintenance and repair of motor vehicles. Until such shops could be built by the Authority, it was necessary to utilize existing warehouses where they were available, or in many cases to do repair and maintenance work in an open lot. Due to the fact that most of the centers were located in sub-humid or desert areas, dust and sand blown by prevailing winds added to the problem and increased the difficulties of proper servicing and maintenance of the equipment. Repair parts and supplies were extremely difficult to secure and were required in rather large quantities in the repair and reconditioning of the obsolete and badly worn equipment.

Another problem which handicapped the maintenance and operation of the motorized equipment badly in the early days of the center was

the lack of qualified personnel for supervision. World War II made an unprecedented demand upon motorized equipment and upon men who were trained to operate and maintain motorized equipment. In addition, high wages paid in war industries made it almost impossible to secure qualified personnel at Civil Service rates of pay to supervise and direct the operation and maintenance of the motorized equipment on the centers. The evacuees, in general, were inexperienced in the maintenance and repair of motorized vehicles. A great majority of these people were farmers, tradesmen, professional people or laborers. Those who had training in mechanics generally had their experience in the fields of radio, refrigeration or similar types of equipment. Generally, the older people were wholly inexperienced in the operation of motorized equipment other than possibly passenger cars or wheel tractors. The younger men were more inclined to take jobs as equipment operators but they in turn were naturally less responsible and not particularly careful in operating and maintaining the equipment.

Since better equipment could not be secured, the Authority had to make the best of a bad situation and attempt to provide facilities for servicing and repair of motorized equipment as rapidly as possible and to organize and train a staff which could put the equipment in reasonable shape for operation. Repair garages were built on nearly all of the centers as rapidly as possible. While these buildings were of necessity of temporary construction, every effort was made to construct them for as efficient use as possible. At Gila River two camouflage net buildings were remodeled and developed into a

satisfactory machine shop and motor repair shop. At Minidoka two warehouses were remodeled and equipped with hydraulic hoists, welding equipment, blacksmith shop and machine shop. At Manzanar a warehouse was remodeled and similarly equipped. At Granada a garage was constructed out of CCC prefabricated panels. On the other centers new buildings of wood construction were erected of sufficient size to handle the large volume of repair work required. These buildings also were equipped with hoists, air compressors, lubricating equipment and the other equipment required to do a reasonably efficient job of motor maintenance.

It was also necessary to construct motor pool areas where the cars and trucks could be parked at night in order to afford them protection and also to prevent unauthorized use of the vehicles. On all of the centers parking lots were developed, fenced and paved in order to provide satisfactory facilities. Service stations were located in such a manner that trucks could be serviced with gas, oil, water and air either as they were brought into the motor pool in the evening or as they left the enclosure in the morning. Wash racks were provided and the operators required to give a reasonable amount of maintenance to the equipment which they drove.

An appointed motor transport and maintenance staff was established on each center to give necessary supervision and direction to the use and maintenance of the motor vehicles. The standard staff consisted of:

- A Motor Transport and Maintenance Supervisor
- An Assistant Motor Transport and Maintenance Supervisor
- A Motor Pool Supervisor
- A Foreman Mechanic in charge of passenger cars and pick-ups
- A Foreman Mechanic in charge of trucks
- A Foreman Mechanic in charge of tractors and other heavy equipment
- One or more heavy duty truck drivers who were used primarily for off project trips

In addition to this appointed staff, sufficient evacuee mechanics and helpers were employed to handle the volume of service and repair work required to keep the equipment in reasonably good operating condition. Evacuee truck and tractor drivers were used in practically all cases.

Along with the provision of the necessary facilities and staff it was necessary to develop certain procedures in order to provide reasonable control in the operation of equipment. Among the procedures and controls instituted were:

1. Monthly inspections
2. Trip tickets
3. Development of driver responsibility
4. The establishment of safety committees
5. The appointment of a Mileage Coordinator
6. Training classes for both operators and maintenance workers

A monthly inspection was made of each piece of motorized equipment on the center to determine mechanical weaknesses which would effect either the safety or the efficiency of operation of the vehicle. Generally these inspections were carried out simultaneously with the lubrication and servicing of the piece of equipment. A

check sheet was used which covered the important items to be covered by the inspection and notations were made by the inspector as to what repairs were necessary before the equipment was placed back in use. If the condition of the vehicle was such as to jeopardize the safety of the driver or if continued operation would seriously injure the vehicle, it was grounded immediately and such repairs as were required to correct the condition were made before the equipment was put back into use. In most cases these inspections prevented major overhaul or repair jobs which would have been necessary had the vehicle continued in operation without such repairs.

Trip tickets were provided to reduce unauthorized use of the vehicles and to reduce mileage to a minimum on the centers. The responsible head of a Section or Division made daily requests for vehicles for specific purposes and for a certain period of time over his signature. These trip tickets were not honored by the Motor Pool Supervisor unless they were properly signed by the requesting Section or Division Head. A very substantial saving in mileage and gasoline consumption was effected with the installation of this system.

In the early organization of the projects, equipment was assigned to various operating branches and the driver of the vehicle was responsible to the operating branch. It was soon determined that in order to hold the operator of the vehicle responsible for its operation and condition, it was necessary to have this individual responsible to the Motor Pool Supervisor. Unless the driver accepted

responsibility for the care and reasonably careful operation of the vehicle, he was not permitted to drive. Swampers, however, were attached to the operating or using unit in the organization, since their responsibility was primarily in the careful handling of the commodities or equipment which were being hauled on the truck. The making of the driver responsible to the Motor Pool Supervisor did much to improve the quality of operation and care of the vehicles.

A Safety Council or a Safety Committee was established on each of the relocation centers. Part of the responsibility of this Council or Committee consisted of the promulgation and enforcement of traffic ordinances and regulations governing the operation of motor vehicles. All accidents even of a minor nature were investigated and responsibility placed in the event of carelessness or negligence on the part of operators. This procedure did a great deal to reduce accidents and excessive wear and tear on motor vehicles.

Early in 1943 a Mileage Coordinator was appointed on each of the relocation centers whose responsibility it was to make every effort to consolidate trips and to eliminate unessential vehicular travel. On practically all centers this action resulted in substantial savings in gasoline and tires on the centers. Quarterly reports were made on each of the centers and transmitted to the agency Mileage Coordinator who in turn transmitted them to the responsible National agency.

Many of the evacuees became interested in training and instruction in the repair of motor vehicles beyond what they could secure in connection with their regular work. As a result, adult classes were

developed and additional training was given in all phases of motor maintenance and repair. In some cases the work was carried out by the center staff and on other centers a cooperative arrangement was set up with State school authorities and outside assistance was provided in conducting the schools. This program did much in improving the ability and techniques of the evacuees in motor maintenance.

In addition to the specific organization and procedures outlined above a Handbook was prepared by the Motor Transport and Maintenance staff in the Washington office consisting of Col. L. E. Fiero and his assistant, Fred B. Wutschel. This Handbook covered rather fully the organization of the work and the outlining of procedures for carrying out the various functions required in connection with the operation and maintenance of the motorized fleet.

As a result of the organization and procedures which were developed in the operation and maintenance of motor vehicles on the centers substantial improvement was noted in the condition of the equipment. This improvement was made in spite of the fact that it was extremely difficult to secure repair parts and trained supervisors and workers.

The inauguration of the trip sheets and the functioning of the Mileage Coordinator resulted in a considerable reduction in mileage. Exact comparisons cannot be made between the fiscal year 1944 and the fiscal year 1945 due to the fact that there were certain changes in population and in development and construction work. However, a comparison of the mileage on the nine centers that were in operation

during this period show a reduction of approximately 4,250,000 miles in the fiscal year 1945 as compared to the fiscal year 1944. Much of this reduction is due to the institution of these controls. In addition, operating costs on the vehicles showed considerable reduction in spite of the advanced age and increased mileage on the various vehicles.

Throughout a good portion of the period during which the centers operated the Authority was able to exchange tires, batteries, and parts common at Army Depots either without cost or at established exchange rates. This made it possible to secure certain other required materials and supplies much more expeditiously than they could have been secured through ordinary commercial channels. Certain exchanges of pieces of equipment were made in the spring of 1943 when the War Department declared surplus large quantities of 1939 equipment which were considered as surplus to the needs of that Department. The Authority secured some 540 vehicles of the 1939 model to replace older models that were extremely difficult to maintain in operation. Approximately 560 older vehicles were declared surplus upon receipt of the 1939 vehicles from the War Department.

As the population decreased on the various centers, particularly after January 1, 1945 when the west coast area was reopened to evacuees, substantial reductions were made in the amount of motorized equipment on the centers. With the completion of construction and the closing of the agricultural programs, trucks, tractors and farm machinery were declared surplus as rapidly as possible. As the centers closed

in October and November, 1945 all motorized equipment was declared surplus other than that required to handle the liquidation program. The garage equipment, repair parts and supplies were inventoried and turned over either to other Interior agencies or to the Reconstruction Finance Corporation for disposal through established channels. Personnel was reduced to a minimum and during the liquidation period repair and servicing was largely secured through commercial channels.

The experience of the War Relocation Authority in handling its transportation problems should be of value to any other agency in the event a similar situation should arise in the future where large numbers of families might be housed together. If such a situation should arise, particular attention should be given by the agency having administration to the following points:

1. In so far as possible camps should be located near rail heads or established motor line and bus routes which would make it unnecessary to haul the tremendous quantities of supplies, materials and equipment from the railheads to the point of use.
2. Basis construction of any such camp should include the construction and equipping of adequate repair garages and motor pool areas.
3. Newer and less worn equipment should be secured if possible, since the old and obsolete equipment is too expensive to operate and maintain.
4. Qualified supervisors should be secured to administer and supervise the use and repair of such equipment and the job should be classified high enough to permit the securing of such qualified people.
5. Rather rigid controls should be instituted to control the use of motorized equipment. We believe that such devices as the use of trip tickets, the establishment of safety committees with administrative responsibility to promulgate and enforce regulations, and the operation of equipment on a pool basis will be valuable in securing such control.

6. If it is necessary to use untrained maintenance workers and operators, a thorough training program should be instituted promptly.

7. Careful and periodic inspection of all motor vehicles should be instituted promptly. This inspection can generally be combined with the servicing of the equipment.

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