

BUREAU OF PUBLIC ROADS

ACTIVITIES IN FURTHERANCE OF INTERNATIONAL AFFAIRS

Staff Conference - Assistant Secretary

THE BUREAU OF PUBLIC ROADS (Remarks by Thomas H. MacDonald)

For the past 30 years the United States has been outstanding among nations in the construction of highways and in the development of automotive transport. We have more miles of surfaced highway and more motor vehicles than all the rest of the world combined. The road machinery and equipment developed by our manufacturers and the design and construction methods developed by our engineers have produced results that have been of keen interest to practically every other country.

The Bureau of Public Roads has expended considerable effort in meeting the demands made for information and assistance as a contribution to international good will and world progress, and because better transportation in other countries will improve our foreign commerce, particularly the markets for automotive and highway equipment.

The assistance has consisted of the following:

1. Supplying literature on all phases of highway development.
2. Receiving individuals and groups from other countries, discussing problems with them, giving courses of instruction, and arranging field studies.
3. Participation in international conferences.
4. Supplying technical direction and supervision in planning, locating and constructing highways under specific Federal legislative authorization and under the general guidance of the Department of State.

Supplying Literature

Many requests for general literature and discussion of particular subjects are complied with. Our most important contribution is through distribution of the bimonthly magazine PUBLIC ROADS in which the studies and research of the organization are reported. Formerly distribution was to practically every country and colony. With discontinuance of mailing to Russian dominated areas the list now includes 54 countries and colonies.

Distribution is free to principal highway agencies, large libraries and technical schools. There is a paid foreign subscription list of some size.

Technical Study Courses

The Bureau of Public Roads has been assisting highway officials from other countries in the observation and study of this country's practices and policies in highway improvement and utilization for over 25 years. An increasing number of visitors was received each year, each visitor being given individual attention. Shortly after the end of World War II the Government of India requested Public Roads to provide a short course of training for a group of 22 engineers from all parts of India. The request was favorably considered, and a course of lectures, discussions and demonstrations in Washington, combined with an extensive field trip, was organized in 1946.

The preparation of the course required Public Roads to consider carefully the many phases of highway administration and engineering as developed in the United States, and to determine what would be

significant for foreign engineers and how it should be presented. The experience gained in organizing and conducting the course of instruction was applied to preparing a similar course the following year for the second deputation of 21 engineers from India.

In April of 1948, Public Roads was asked to prepare a series of lectures on highway practice in the United States for presentation to international guests attending the Road Show sponsored by the American Road Builders Association in Chicago during July 1948. These lectures have since been revised and published under the title "Highway Practice in the United States of America", used as the basic text for the instruction of highway engineers studying with Public Roads.

It had become apparent by the middle of 1948 that Public Roads could expect each year an increasing number of highway engineers and administrators from all parts of the World, interested in making longer and more detailed studies of our highway practice. As their number increased, so would the amount of time required to provide the necessary instruction, if they continued to arrive at irregular intervals throughout the year. Each individual or small group would have similar interests, requiring our engineers to repeat the same instruction several times each year.

Public Roads proposed to the Department of State in July 1948 that a course on highway practice, similar to those prepared for the Indian engineers, be given each year, and that other governments be invited to send their engineers to this country at that time. Such a plan would permit us to prepare a better, more comprehensive course of instruction than could be arranged for individuals or small groups on

relatively short notice. It would also greatly reduce the amount of time spent by our specialists on instruction as they would be called upon only once during the year. The Department of State endorsed our proposal and on September 2, 1948, sent out an announcement of a 17-week course to be held between May 16 and September 9, 1949.

Seventeen countries responded to the invitation by sending a total of 52 delegates to the course. The first six weeks of the course consisted of a series of lectures and discussion periods for the entire group, and was followed by a two-weeks tour of equipment and automobile manufacturing plants in the Detroit, Chicago and Milwaukee areas. The delegates were then divided into small groups for an 8-week trip for detailed studies of field operations in several States selected to meet particular interests. The final week of the course was high-lighted by a formal closing at which time certificates were presented to each delegate in recognition of his participation in the course.

The interest shown in the 1949 course, both by other governments and the delegates they sent, prompted the dispatch of invitations on September 28, 1949, to send delegates to our second course. This course lasted 16 weeks, starting May 15 and ending September 1, and was attended by 55 delegates from 18 countries. Experience in presenting the three earlier courses, as well as the recommendations of previous delegates, led to alteration of the form of the course, but not its basic concepts. The 16-week period was divided into five parts.

PART I	-Introduction and Orientation	- 2 weeks
PART II	-Construction and Maintenance Field Trip	- 3 weeks
PART III	-Specialized Studies	- 5 weeks

PART IV -Group Field Trips

- 5 weeks

PART V -Final Week

All delegates followed the same schedule for the first 5 weeks, the Introduction and Orientation, and the Construction and Maintenance Field Trip. During the specialized study period they attended only those classes in which they were particularly interested, utilizing the rest of their time for reading, report writing and individual discussions. Some idea of the thoroughness and coverage of the course is conveyed by the fact that during this period alone 91 lectures were given, covering all phases of highway improvement and utilization. Over 50 engineers of Public Roads participated in the lectures, but the work of running the course required the full-time services of only the Director and a small staff. A special library and reading room was provided for the delegates, which includes all the references given for the subjects covered in the course. The delegates were divided into 16 small groups of 3 or 4 for the Part IV field trips, each group being composed of delegates with somewhat similar interests, responsibilities or conditions in their own countries.

Public Roads expects to conduct a third course next year, which will be very similar to that of 1950.

It should be noted that 26 of the delegates to this year's course from 10 countries were sponsored by the Economic Cooperation Administration. We are also cooperating with E.C.A. in arranging training in highway engineering for groups from Turkey, France and Sweden, for periods of from 4 weeks to a full year. We anticipate other requests from E.C.A. for similar training programs in the future.

Our formal courses have succeeded in bringing together at one time the engineers interested in detailed studies of our highway practice. Last fiscal year we received nearly 200 engineers from about 30 countries, more than half of whom attended these courses. In general, the others were with us only a very short time, or were interested in specialized or advanced studies beyond the scope of the course.

Aside from the purely technical aspects of our training courses, we feel that our activities contribute to better international understanding. Our formal courses bring together engineers from many countries, who, during their stay in this country, are living and working together, and thus discovering their common interests and learning how the other fellow lives. Our visitors are the recipients of invitations from Public Roads and State highway people, both in Washington and in the field, to visit in our homes and to see how the Americans live. These purely informal occasions have resulted in many lasting friendships, and have certainly gone far in promoting a better understanding of this country by people from all over the world.

Participation in International Conferences

The Permanent International Association of Road Congresses was organized under French leadership for the purpose of holding meetings at four-year intervals for discussion and exchange of information on highway matters. The United States joined the association in 1926 and sent an official delegation to the congress in Milan in that year. The next congress was held in Washington in 1930 with the United States as the host nation. Subsequently we have sent official delegations to congresses at Munich in 1934 and The Hague in 1938.

Public Roads has been represented on each of the United States delegations, and we have done much of the preparation and organizational work necessary to participation in the congresses.

Headquarters of the organization are in Paris and it ceased to function during the war.

The organization has been reactivated since the war ended and will hold a congress in Portugal in 1951. Our government has not acted to continue membership for several reasons. An important one has been the desirability of discontinuing international organizations, operating parallel with the United Nations and performing similar or related functions.

The Bureau is called upon to participate in any activity of United Nations relating to highways and motor transport. Two of its engineers were included in the delegation of the United States to a United Nations meeting in Geneva, Switzerland on motor transport.

At a Conference of American States held under the direction of the Pan American Union in 1923 at Santiago, Chile, it was resolved that the participating countries of Latin America designate and construct a system of international motor roads connecting the capitals of the several countries. Growing out of this resolution a series of Pan-American Highway Conferences has been held at irregular periods. The fifth will be held in Lima, Peru, in 1951.

The Bureau of Public Roads has supplied members of the delegations representing the United States at these congresses.

In 1929 and in 1930 two special conferences were held in Panama with representation confined to the United States, Mexico and Central

American countries. The conferences were for the specific purpose of promoting that section of the Pan-American Highway System lying between the United States border and the Panama Canal. This section is known as the Inter-American Highway.

Highway Construction in Foreign Countries

Inter-American Highway

In 1930 Congress gave its first direct support to proposed extension of highways in Latin America by providing funds for the reconnaissance survey of a road to connect North and South America. Under guidance of the Department of State the survey was begun in 1930 and completed in 1933. A report was published as a Senate document.

In 1934 Congress made available an initial construction fund of one million dollars to be expended on the Inter-American Highway. This money was used in countries south of Mexico for bridges or sections of highway which would be immediately serviceable and which would demonstrate the possibilities of modern road and bridge construction.

Subsequent authorizations to either the State Department or Public Roads have brought total authorizations to \$33,100,000.

Through our Inter-American Regional Office and field offices in Central America we have supplied technical direction and guidance in expenditure of these funds and matching funds supplied by the various countries. Our work has included surveying, preparation of plans, supervision of construction and solution of supply, and other problems incident to work in remote areas.

It has been the policy to employ men of the countries in which work has been done for all technical, supervisory and other positions

- 3 -

that they are capable of filling or for which they may be trained. The capable road and bridge building crews created are an important part of our contribution.

The following tabulation shows the improvement status of the Inter-American Highway at the present time.

	<u>Miles</u>	<u>Percent</u>
Paved mileage	524	33
All-weather mileage	800	50
Dry-weather mileage	42	2
Impassable mileage	<u>239</u>	<u>15</u>
TOTAL	1,605	100

Assistance of the United States to Central American countries has already produced a marked effect on their economies. Trucks and busses are being used instead of the backs of men and mules. Rich lands, unused because of inaccessibility, are being cultivated. Food supplies are better because of the possibility of exchange of products between producing areas. The market for our automotive machinery and other products is growing, and in exchange they offer greater quantities of minerals, coffee, bananas, hardwood and other tropical products. A movement has been started that will grow and produce still more profitable exchange of our products for things we need and cannot produce in this country.

Rama Road - Nicaragua

Associated with work on the Inter-American Highway is the construction of the Rama Road in Nicaragua. It extends 158 miles from settled areas on the Pacific coast, through undeveloped fertile areas to the Atlantic coast. The United States began assistance in constructing this road in 1942 in exchange for certain privileges granted

this country in Nicaragua, and Public Roads has supervised the expenditure of \$4,000,000 on the road. Nicaragua has met a considerable part of the cost of work that has been done.

Alaska Highway

During the war Public Roads supervised construction of the Alaska Highway with funds supplied by the War Department. Work on Canadian soil, using Canadian materials, employing Canadian men and contractors and subject to Canadian import, employment and tax legislation involved many contacts with Canadian officials. Their friendly and cooperative attitude was of great assistance in doing the job.

Lempa River Bridge - El Salvador

At various times we have responded to formal requests of Latin American countries, made through the Department of State, for assistance in highway matters. Currently two of our engineers are in El Salvador assisting in the construction of a suspension bridge over the Lempa River.

Technical Assistance - Ecuador and Colombia

Technical assistance is being given Ecuador in preparing plans and constructing sections of the Pan-American Highway through extremely rugged portions of the Andes Mountains. Recently an engineer has been assigned to assist the State of Cundinamarca in Colombia in planning and constructing a highway system.

Road Mission - Peru

In 1949 Peru requested assistance in the reorganization of its highway department, the financing of its highway program, purchase of equipment, and field instruction in the operation and repair of

equipment. Three engineers recently arrived in Peru and are at work. Local expenses of the mission are met by the Peruvian government.

Cochabamba - Santa Cruz Highway - Bolivia

Surveys, plans and estimates were completed and turned over to the government of Bolivia and the Export-Import Bank for the 312-mile highway from Cochabamba to Santa Cruz.

Road Mission - Turkey

Activities of Public Roads in Turkey began in 1947. Initial aid for the improvement of highways was made possible by an allocation of five-million dollars of the funds authorized for assistance to Greece and Turkey, in response to the Turkish government's expressed desire to benefit by experience and methods developed in the United States in highway construction, maintenance and administration. A staff of engineers including specialists in various branches of highway work was sent to Turkey. In 1949 the Public Roads Administration was requested by the Economic Cooperation Administration to procure additional equipment and to continue to advise and instruct Turkish personnel in matters connected with the highway program, this activity to be financed by a five-million dollar loan to the Turkish government.

A national highway system for Turkey has been laid out, and maintenance, betterment and construction programs devised which, for 1948, required about thirteen million dollars for labor and materials, all of which was financed by the Turkish government.

Training provided by our experienced men has enabled the Turkish Department to make their own surveys, prepare their own plans, and carry on field material surveys and laboratory tests as they are needed in both the maintenance and construction divisions of the Department. Bridges have been designed and built at very low cost by the Department's own forces, using local materials. Definite progress has been made in the improvement of maintenance through construction of highways

to modern engineering standards and by the mechanization of maintenance operations.

The program is enabling Turkey to adopt and execute a broad constructive plan for gradual development of its highways in accordance with the economic capacity of the country. United States assistance in highway work is enabling the Turkish people, through their own organization, to benefit through the application of technical knowledge and the use of power equipment in every part of their highway work, which in turn is lowering transportation costs and making possible the expansion of agricultural and industrial production.

Rehabilitation of Philippine Highways

In 1946, Congress passed the Philippine Rehabilitation Act providing financial aid to the stricken country in repair of war damage and in economic rehabilitation. Forty million dollars was authorized for highway reconstruction and improvement. Public Roads was designated to supervise this work and promptly established a division office in Manila.

It was originally planned to work with the Philippine Bureau of Public Works very much as we work with a State Highway Department, that is, plans would be prepared and construction supervised by the Bureau of Public Works under our general supervision. However, the Bureau had lost much of its personnel and there was urgent need for action in doing a large job. A large mileage of highway had been severely damaged by military operations and 621 permanent bridges had been destroyed.

Public Roads assumed responsibility for design of several highway

projects and many of the larger bridges. At the same time intensive efforts were made to obtain needed materials and equipment, much of it from this country, and establish construction organizations and paving plants.

Construction operations were soon under way, the first efforts being directed toward opening the main arteries in the Manila area. The entire authorized program is now well advanced toward completion.

Considerable effort has been directed toward an over-all training program for Philippine engineers. Training in materials-testing procedures has been given in the laboratory to a number of engineers from provincial offices and in the field to men at work on construction. Groups of Philippine engineers have been sent to this country for training.

Our work in the islands is scheduled for completion this fiscal year and we expect to leave a well organized and trained Philippine organization to carry on in the future.