

Transportation School Offers Public Service

By RONALD BOTT
Special Writer

How to use and develop transportation to its greatest potential in serving the public is the objective of research and educational endeavors of the Texas Transportation Institute here.

The institute came into the System in 1950 to:

Research transportation of persons and property, including the economy of transportation, physi-

cal plants and property, the moving carriers with regard to their medium, air transport and any other phase or activity concerned with the movement of persons or things.

Receive and expand funds donated by approved sponsors to these objectives.

Provide graduate instruction for advanced degrees in this field.

The Institute receives guidance from an advisory committee of about 60 men who represent the social, financial, economic and engineering phases of transportation and are vitally interested in and familiar with the problems of all forms of transportation.

The institute may take advantage of other facilities and personnel of the A&M System, including the Data Processing Center, largest campus-based computing center in the Southwest.

Also available are the Nuclear Science Center laboratories, with a reactor designed for 5-megawatt operation at each of two positions and buildings and paved areas for the A&M Research and Development Center which occupies nearly 2,000 acres north of Bryan.

The institute utilizes the investigative approach of theory and evaluation through experimentation and practical application. Project advisory committees of highly qualified engineers from the sponsoring agencies and research personnel from appropriate teaching groups provide valuable advice and guidance for each project.

Projects conducted in highway research include planning, design, construction, operation, maintenance, safety and economic effects.

TTI cooperates extensively with the Texas Highway Department and the U. S. Bureau of Public Roads.

Through various academic departments, the institute provides graduate work leading to Master's and Doctor's degrees. It offers information to the transportation industry through special adult education courses and publications, and conducts the annual transportation conference, short courses in traffic engineering and highway short courses.

TTI also assists in bringing transportation specialists to campus.

Institute researchers have already provided successful solutions for many problems in transportation: More enduring pavements, methods of utilizing more readily available aggregates for construction, test advancement and improving the quality of paving asphalts.

Although public demand has placed considerable emphasis on highways, operations of the institute are planned in four other areas: water, rail, pipeline and air.

Versatility of asphalt as a paving material has long been recognized in construction of pavements. Research at TTI has been directed toward development of asphaltic mixtures such as slurry seals for light treatments of road surfaces and toward the evaluation of new materials for use in paving.

An investigation is in progress to evaluate the quality of paving asphalts. The effects of time, heat, oxygen and sunlight are being determined on representative asphalt cements.

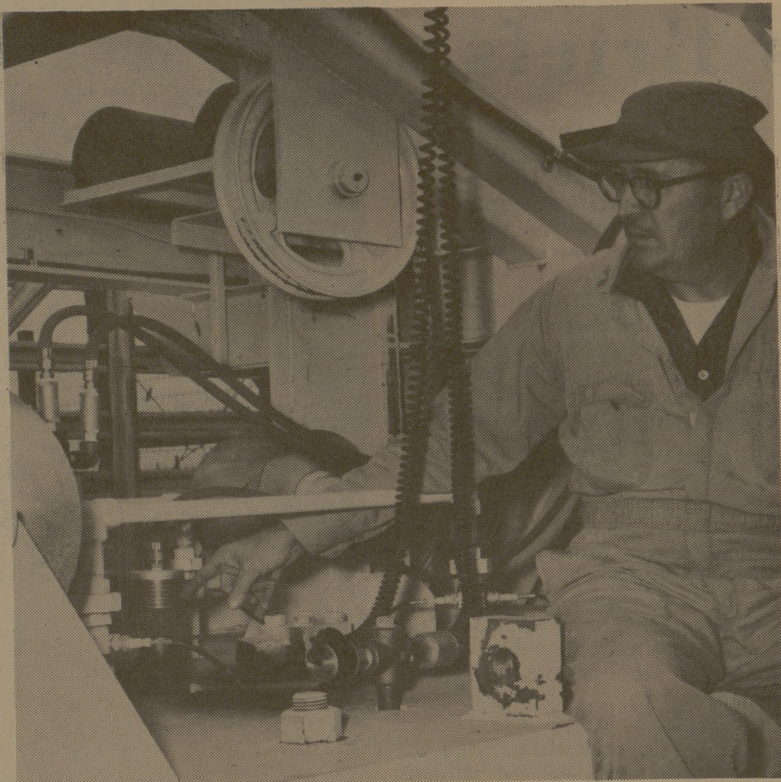
Economic research is being conducted on a broad front. Various aspects of transportation are being studied.

In cooperation with the Texas Highway Department and the U. S. Bureau of Public Roads, a concerted effort is being made to determine and evaluate the economic consequences of constructing new highways throughout the state. These effects are measured in terms of influence the new highways have on land values and use, business activity, travel habits and other areas.

Economists further aid transportation by studying special area, such as costs of operating private trucking fleets to provide information on alternative costs for better procurement and distribution of goods.

Transportation costs the U. S. more than \$100 billion annually. It is a vital force upon which much of the nation's economic and social well being is dependent.

The A&M affiliate is doing its share to understand and solve many of the industry's problems.



SEISMOGRAPHIC HAMMER

Floyd Mauldin, operator for Independent Exploration Company of Houston, sits on a device used to send vibrations into the earth for seismographic study. Gas is injected into the 4 1/2-foot chamber by lines and the mixture is detonated by eight sparkplugs. Such equipment is being used to chart sub-surface formations on campus.

Campus Delegation To Attend Engineering Banquet Thursday

Three Texas A&M representatives will share in the St. Patrick's Day Thursday honors and awards banquet of the South Texas Section of the American Society of Mechanical Engineers in Houston.

Dr. Dale F. Leipper, A&M oceanography professor, is the main speaker. "Approaches to Research in Oceanography" is his subject.

Ronny John Chauviere of Waco will receive the Hugh Scott Cameron Awards as A&M's outstanding senior mechanical engineering student.

Dr. George H. Thompson, professor of mechanical engineering, is a member of the awards committee and will appear on the program.

Bulletin Board

WEDNESDAY

Aggie Wives Bridge Club will meet at 7:30 p.m. in the Memorial Student Center.

Hillel Club will meet at 7:30 p.m. in B'Nai B'rith Building.

Aerospace Wives Club will hold a cake sale in front of the Exchange Store.

Seismograph Study Made On Campus

A Texas Aggie-sized 18,000-pound hammer is swinging at the ground around A&M.

Resulting vibrations determine sub-surface structures of College Station.

An Independent Exploration Company seismographic unit is performing the study along Jersey St., in preparation for a proposed highway bypass across the southside of the campus. Independent's equipment is also used in oil surveys.

The Dynoseis Exploration unit of Houston requires two primary pieces of equipment. A record equipment truck is connected to a series of geophones strung

along a half-mile wire line. The phone, smaller than an ink bottle, can record vibrations of a person walking nearby.

The "gun truck" packs an 18,000-pound, pan-shaped chamber that is lowered to the ground at intervals. Gas is injected into a 4 1/2-foot chamber and detonated by means of eight sparkplugs. The "thump" is a geological measuring tape.

Roscoe Wilber of Houston, in charge of the unit, said two-mile lines of phones are normally used with two "gun" units for seismographic work. The equipment takes the place of regular oil field seismic charting equipment.

Job Calls

WEDNESDAY

Ingersoll - Rand Company — civil engineering, electrical engineering, industrial engineering, mechanical engineering.

Swift and Company — agricultural economics, agricultural engineering, animal husbandry, animal science, civil engineering, electrical engineering, mechanical engineering.

Department of Agriculture Conservation Service — agricultural economics, agricultural education, agricultural engineering, agronomy, animal science, plant sciences, range management, wildlife science.

Chicago, Rock Island and Pacific Railroad Company — civil engineering, electrical engineering, industrial engineering, mechanical engineering, business administration, accounting, economics.

Upjohn Company — agricultural education, animal husbandry, biology, business administration, marketing.

General Mills — chemical engineering, chemistry.

Lone Star Gas Company — chemical engineering, civil engineering, electrical engineering, industrial engineering, geology, mechanical engineering, petroleum engineering.

United States Steel — chemical engineering, electrical engineering, mechanical engineering, accounting.

Trane Company — aerospace engineering, chemical engineering, civil engineering, electrical engineering, industrial engineering, mechanical engineering.

Upjohn Pharmaceutical Sales — biology, chemistry, zoology, animal science, agricultural education, marketing.

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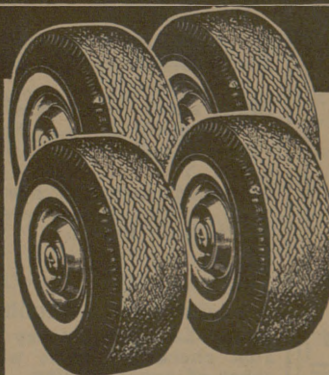
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