

The NEWS

OCTOBER

CANADIAN AVIATION

1953

RCAF CONSTRUCTION PROGRAM UP TO SCHEDULE

The RCAF's vast construction program across Canada, expected to cost an estimated \$400,000,000 before completion next year, is reportedly making good progress.

Shortages of materials and other obstacles have set back certain individual parts of the program but generally the whole construction effort is well up to or ahead of schedule.

Considered the backbone of the RCAF's expansion, the building program stretches across Canada and involves construction or expansion of both operational flying and training stations, supply and repair depots, command and station headquarters, radar stations, and many other projects.

A major item of the construction program has been and is the lengthening of runways at stations already in operation, and at reactivated wartime stations. This has been necessitated by requirements of modern jet fighters and heavy transport aircraft. Majority of the wartime-built runways were required only to serve light training aircraft.

One of the big problems facing RCAF authorities and their consulting architects has been the task of devising structures which will not be outmoded in the near future, but yet which are not prohibitive in cost. During the Second World War the problem was comparatively simple. Practically all Air Force construction then was of an emergency type, designed only to serve for a limited period of time. Today the problem is somewhat different.

The problem has been solved by dividing new construction into three types, according to the length of time and the degree to which it is felt that the RCAF will require the use of the station or building concerned. Construction, therefore, runs from work of a permanent nature to construction of buildings

designed for a life span of from five to ten years. Wherever possible, designs and plans allow for future expansion if necessary.

Among the most complicated items included in the building program are newly-designed hangars, being built at numerous airfields. Largest of the three standard types of hangars is the cantilever model, constructed to house the big aircraft of today and of the future. This cantilever model incorporates the experience and the many ideas of Air Force construction officers, and is expected to save money from an overall point of view. The hangar is so constructed as to provide a good deal of office, working and storage space which would otherwise require separate buildings.

The hangar is also designed to allow ready expansion with an eye to bigger aircraft in the future. The standard cantilever type costs close to four million dollars.

New bombing and gunnery ranges also account for a sizeable part of the total building costs. These must be located in areas where increased firepower of modern fighters can be tested and practiced without interruption or fear of damage to persons or built-up areas. One of the most notable of these is being built at Cold Lake, Alta., and the range will cover an area approximately 115 by 40 miles. Involving construction of an entirely new station, and expected to cost about 30 million dollars, this range is being carved out of scrub land 100 miles north of Lloydminster, Sask. It is one of the biggest single projects in the current construction program and when finished, will be one of the world's largest air training centres of its type. The range will be used for bombing and gunnery operations, and can also be used in connection with the development and evaluation of vari-

ous forms of weapons, including air-to-air rockets. Despite development of the range, the Air Force will still require bombing and gunnery ranges at other points for local use by both regular and reserve fighter squadrons.

The expansion of the RCAF's Air Material Command is emphasized by construction of two large supply depots at Downsview, Ont., and Namao, Alta. Each will cover close to 20 acres under one roof and will serve as supply points for Air Force units in eastern and western Canada. Ultimately Air Material Bases will be located at these two points, incorporating repair depots and other services.

New permanent radar stations now are in use, and account for another large part of the building cost total. Sites for these stations have been determined mainly by their place in the over-all radar screen and often their inaccessibility has made much pre-construction work necessary. Roads have been laid in to the sites through virgin country, water systems from nearby lakes developed, power stations and transmission lines erected and many other services provided for these new outposts of defence.

The new flying training schools, located on the Prairies, have made their appearance on the sites of wartime training stations. In many instances, however, they are almost unrecognizable from their wartime days. Much of the wartime construction has been rehabilitated, but nevertheless substantial new construction work has been necessary. Most noticeable addition are the married quarters, which did not exist on wartime built stations. In many cases obsolete heating, water and electrical plants have been replaced with up-to-date equipment. Modern runway and airfield lighting has replaced the old flare-pot light-

ing used on many of the old airfields.

Numerous Department of Transport airfields across Canada are being overhauled for the RCAF to ensure that they can handle Service requirements. Some of these were used by TCA before it introduced heavy, long-range aircraft that rendered the fields inadequate. Runway construction is the major item at these points.

The unprecedented peacetime demands on the RCAF, both for NATO training and for active defence, has necessitated this vast construction program.

Thomas S. McCrae

Thomas S. McCrae, general manager of the Gas Turbine Division of Avro Canada for the last two years, has resigned to return to the Allison Division of the General Motors Corporation in Indianapolis, Indiana, where he previously was assistant director of engineering.

Crawford Gordon, Jr., president and general manager of Avro Canada, will assume Mr. McCrae's duties, presumably until another appointment is made.

During Mr. McCrae's period of duty at Avro Canada, a new manufacturing plant for jet engines was constructed and put into production on the Avro Canada-designed Orenda turbojet for the RCAF.

Mr. McCrae's experience on aero engines extends back to the 1920's when he worked on the development of the Curtiss D-12 Conqueror, the Super Conqueror, the Challenger and the Curtiss Chieftain engines with the Curtiss Airplane and Motor Company in Buffalo, U.S.A. He joined General Motors in 1931 on his return from a trip to Japan and China where he had gone the year previous to consult on Wright and Curtiss engines.