Early in 1939 a site of 85 acres, adjacent to the Ottawa Air Station, was secured and 45 acres adjoining this site were transferred to the Council by the Department of National Defence. Plans for the construction of new buildings on this site were made but, as the inevitability of war became more apparent, it was decided to proceed immediately with the construction of only such structures as would have a direct wartime use in dealing with aeronautical engineering problems. Construction of the aerodynamics building was started on Oct. 17, 1939, and later several other buildings were erected. These included the shops and separate laboratories for research on engines, gas and oil, hydraulics, explosives and structures. In all of these units the facilities were extensively employed on important projects during the War.

War Activities.—Closest co-operation with Departments of Government and other research institutions was fostered and maintained in the promotion of war research. Early in the War, following a survey of laboratories made by the Council, facilities in many universities and industrial establishments were freely offered to the Council for the conduct of special investigations. As a result, the Council became responsible in the later years of the War for research in more than a score of establishments outside of Ottawa. A radio station was set up near Ottawa to enable adequate research to be carried on in this field. The Council was officially named as the civilian research establishment of the Navy, Army and Air Force, and research for these three Services was carried out as required throughout the War.

The contribution of Canadian scientists in the development of new devices, methods and products during the War was widely recognized in such fields as radio-location, aids to the Navy in mine and submarine detection, control of gunfire and other ballistic problems, new and more powerful explosives, emergency methods of food storage and transport under war conditions, development of special types of clothing, and other equipment for Navy, Army and Air Force requirements. Problems relating to the physical well-being of the troops involved studies in nutrition, housing, sanitation, medical examination of recruits and treatment of the injured and sick. Special subjects such as burns and the treatment of shock became important. Blood banks necessitated research on methods of storage and preservation. Conferences on amputations were held to bring work in this field into focus. Special medical committees were created to deal with specific subjects.

On the civilian side, the National Research Council was able to offer constructive aid in the testing of inspection gauges used in all munitions plants. Glass production methods were evolved for the manufacture of needed telescope and other instrument lenses and a new industry was established. Radiology was applied to the inspection of castings, and teams of individual workers from industrial plants were trained in its use. Paints, rubbers, textiles, metals for special purposes, and defence measures against the possible use of gas in warfare were investigated. A new process for the production of metallic magnesium found commercial application in both the United States and Canada. Synthetic rubber research was linked with similar work elsewhere and applied to industrial operations. Cold-weather problems were given special attention to meet the requirements of the Armed Forces working in northern latitudes.

The National Research Council was largely responsible for the organization of Research Enterprises, Limited, a wholly Government-owned Company formed for the purpose of manufacturing in quantity special secret military equipment from prototypes developed in the National Research Laboratories. The policy of