

taken to see that the buildings are not of such an expensive type." The very fact that this expensive type of building is being put up annoys our people and makes it that much harder to get in taxes and to sell victory bonds. I should like to know just what system the Department of National Defence has of checking the type as well as the cost of the various buildings that are being put up for military purposes.

Mr. RALSTON: The system is that the particular service which considers that the building or other structure is required makes a requisition, which comes through the particular district concerned, to the national defence department. I may as well deal with the question of construction, *vis-à-vis* existing buildings, because it seems to me that that comes into it.

The question always is whether or not the service can do with something which exists at the present time, either by, if it is for accommodating personnel, putting more personnel in that particular building, by making such readjustments that less floor space will be occupied per head; or readapting the building; or making some addition to the present building; or acquiring some building already constructed and adapting it in order to save labour and material.

In the army we have adopted a practice of requiring from the district officer commanding what we call a certificate of necessity with regard to new construction. We ask him to certify that he has carefully reviewed the necessity for so-and-so—whatever it may be, and he says:

With full knowledge of my responsibility I give assurance

(a) that full consideration has been given to the necessity of conserving materials and labour involved in further construction;

(b) that the provision of accommodation to the extent and for the purposes proposed is necessary in the interests of the service;

(c) that no rearrangement of personnel is feasible to provide the required space in existing accommodation;

(d) that there are available no existing buildings held by the government which could practically be altered or extended to provide the required accommodation;

(e) that the necessary additional accommodation cannot be secured by acquiring or leasing on any reasonable terms existing civilian buildings;

(f) that there is no other feasible provision which can be made as economically for the services required.

After that certificate is signed and forwarded to headquarters, the matter has to be dealt with; that is, the deputy minister and the engineer services generally examine into the matter, and if they consider there are no

facts which would justify them in questioning that certificate, the question of the best type of building then becomes the responsibility of the engineers of the quartermaster-general's branch. The deputy quartermaster-general (engineering) is himself an engineer and was a contractor in civil life, and he is, I think, well acquainted with the necessities regarding types and various kinds of construction.

I think the general plan followed in connection with the construction of these temporary or semi-permanent buildings is that they should have at least five years' life; that is to say, the services and the general equipment must be such as will give service for five years. In that connection there has been experimentation, of course. If my hon. friend is thinking of buildings in Ottawa, some buildings were started quite early; I believe the first buildings which were erected were put up by the Department of Munitions and Supply to house their personnel. I should think that that general type of building has been followed pretty consistently. There have been changes from time to time, but the instructions are and every effort is made to build a building at the lowest possible cost consistent with the purpose for which it is required. That is to say, in weather such as we have had you cannot house personnel, either male or female, in buildings which are not properly heated, which are not properly ventilated, which have not a reasonable amount of light and which are not reasonably convenient; also, such buildings should be reasonably soundproof, so that there will not be too much noise from one office to the other.

The engineers of all three of the armed services have been at work on these matters endeavouring as far as possible to evolve the best possible type for the least money; that is, so far as what might be regarded as temporary buildings in Ottawa are concerned. I know, as my hon. friend knows, that, for instance, Camp Hill hospital at Halifax was erected as a temporary building in the last war and that it is still being used. The same state of affairs exists with regard to St. Anne's in Montreal. You cannot put up a building which is so temporary that it will fall down just at the end of five years and yet have been sufficiently useful for the purpose for which it was intended. There is therefore a degree of permanency in connection with all these buildings.

With regard to camps, quite early we evolved a plan of hut construction. That has been varied somewhat as time went on and as experience gave us opportunities to