ABSTRACT

Quality Assurance is often seen as unnecessary bureaucracy, to be adhered to the minimum degree, but if approached with the right attitude, it can lead to great improvements in efficiency, productivity and confidence.

Quality Assurance is well known in the mass production industries, but is still in the introductory stage in the construction industry. Not many works were done on Quality Assurance in construction in general and in civil engineering in particular. Many works were, however, completed on quality control and quality management.

Quality Assurance is less well known than Quality Control. Quality Assurance is concerned with all productive activities. Quality Assurance includes, but is broader than, Quality Control.

The application of Quality Assurance seems to be confined at present to large multidisciplinary projects, discrete parts of projects and small repetitive projects.

The scope of study in this dissertation is only confined to civil engineering projects for public housing in Singapore as Quality Assurance in the entire construction industry is considered too wide a scope to be undertaken for a study of this nature.

This study is aimed at testing the following hypotheses:

(a) there is no formal Quality Assurance System for civil engineering projects for public housing in Singapore, and

(b) Quality Assurance in civil engineering projects for public housing is necessary.

Besides literature review, a postal questionnaire survey was conducted from October to December 1992 in order to obtain empirical data for the above hypotheses. The survey forms were sent to all the 67 civil engineers in the Housing and Development Board and 53 active civil engineering
contractors with above average score for workmanship. A total of 39 civil engineers and 14 contractors responded to the survey representing a response rate of 58.2% and 26.4% for the civil engineers and contractors respectively.

From the survey results, it is evident that there is as yet no formal Quality Assurance System in civil engineering projects for public housing in Singapore. However, a majority of the contractors believe that Quality Assurance in civil engineering projects is necessary.

The study also revealed that many of the contractors are not prepared to formulate the Quality Assurance System for their own firms at this moment. They find it not cost-effective to do so unless they are compelled by the specifications.

Some of the contractors are willing to implement a Quality Assurance System. But they do not know how and where to start.

Some proposals are recommended in this study to serve as a guide to those who wish to implement the Quality Assurance System.

Besides studying the general background of Quality Assurance in Singapore and outside Singapore, this dissertation also reviews the development of Quality Assurance System in the Housing and Development Board, the public housing agency of Singapore.