

Quality Construction of Public Housing

HKIE Paper for LegCo Panel on Housing
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1. Introduction

- 1.1 The Construction Industry in Hong Kong is a mature industry with professionals and contractors jointly and proudly produced many quality projects in both the private and public sectors. In many of the infra-structure projects and transportation projects, a lot of innovative designs, new specifications and contract administration, and even untried construction methods in Hong Kong, ways to select the right consultants and competent contractors, have been adopted to meet end-user's expectation and satisfaction at a reasonable cost with little hassles.
- 1.2 As for the production of public housing is an established and repetitive construction process under strict specification and contract document, governed by a comprehensive management manual. These housing projects are managed by teams of highly paid project administrators and professionals. However the repeated shoddy construction works revealed lately in the public housing construction had led government officials repeatedly to generalise the issue to the construction industry in general and the construction professionals in particular.
- 1.3 The Council of the HKIE has strong reservations on such allegations, as such generalisations in public have put the reputation of Engineers in unfair jeopardy. A critical review of the whole process of public housing production from initiation till completion is fully justified.

2. Overview

2.1 Management and Accountability

The production of public housing is a construction project on its own. The Housing Department ("HD") is the owner/developer with housing policy set by the Housing Authority ("HA"). The Director of Housing ("D of H") is the project leader who provides for the project design brief, lays down the project design criterion, sets the minimum standard in the specifications, supervises the design and construction by in-house staff with an aim to produce public housing with a fast and mass production at a minimum cost. The HD provides for a one line housing construction service without external audit, especially professional/technical audit.

2.2 Procurement of Professional Service

For good project management, it should provide for a realistic balance between cost, quality and time. Reasonable fees must be awarded to the consultants and reasonable prices must be offered to the contractors in order to complete the project with an acceptable quality and within reasonable time. Any over-emphasis on one particular element will up-set the equilibrium of the others. Project leaders in the HA/HD seem comfortable to ignore such an equilibrium without recognising or acknowledging the reality in life.

2.3 Consultant and Contractor Selection

While we do not find major problems with the current practice of competitive tendering, yet the following points should be noted. Reasonable prices for the consultants and contractors in each housing project should be maintained no matter how keen is the competition. Should the project leader find the tendered/proposed fee returns from consultants or the tendered price return from contractors were unrealistically low, the project management team should not accept such lowest offers. He should order a re-tender or accept the reasonable ones. It is immoral for the project team to accept any cut-throat prices offered by either the consultants or the contractors. It is also unethical for the consultants or contractors to offer unrealistically low prices. A mechanism of supervision and control is therefore essential.

2.4 Consultant Monitoring

With regard to consultants, the minimum man-hours with unit rates in various grades of staff to carry out the various tasks throughout the assignment cycle together with a list of out of pocket expenses with unit rates should be provided in a fee proposal. This is necessary to see whether the expectation from the project management team has been met. The project would move smoothly if each other's expectation is understood and met. Over-emphasis on minimum fees without reference to quantity and quality of output is an "ostrich approach" to reality. Any under-manning in any stage of the task should be revealed for rectification.

2.5 Design Brief and Procedures

In addition, with a rigid design brief, fixed design parameters and an un-compromised management manual, the consultants have little room for innovation or manoeuvring especially when working within an extremely tight schedule. Indeed, the consultants have little incentives for any changes. As a consequence, they cannot be held responsible for any failure in any part of the project including they have performed as instructed. Therefore a more mutually co-operative (partnering) approach, rather than the currently dogmatic and bureaucratic approach should be adopted to accommodate any variations for better quality finish of the housing project.

2.6 Assignment of Contract

It is well-known that the enlisting of a contractor on the Housing List is an extremely difficult matter. Yet, it is commonly known that total assignment of construction contract in HD seems tolerable. The contracting construction company should not be allowed to totally assign its construction contract to other party. However, the sub-letting in specialist trades is the norm practice in the construction industry and we see nothing wrong with that. The total assignment of contract allows such assigned contractor to reap off the cream of the profit without putting in any effort. Such a practice should be stopped.

3. Conclusion and Recommendations

- 3.1 The HKIE therefore advocates that HA/HD should seriously consider the establishment of a procedure to prepare for a reasonable price for the consultants and contractors in each housing project as a yard stick to assess their offers so that a reasonable profit as a genuine business is achievable. This will discourage them in finding ways and extreme means to cut corners to the extent of affecting the quality of housing construction. It would seem that before the award of any works to either the consultants or contractors, a review of their work load, human and other resources seems unavoidable.
- 3.2 In the construction industry, four levels of supervision is mandatory, at project management level, at professional level, the technician level and trade level. The HKIE advocates that for engineering works, Corporate Members should be employed to carry out supervision work at project management level and profession level, Associate Members at technician level and trade level. The HA/HD should require the contracting company to directly employ adequate qualified and experienced supervisory staff for the sake of quality assurance. Only a committed employer would attract committed employees. On the other hand, HA/HD might want to encourage independent third party inspection or auditing for impartiality. Employment of skillful workers is essential in order to reduce the chance of any shoddy works.
- 3.3 Nothing is more important than a quality design brief. The project team should spend adequate effort in preparing this document because garbage in garbage out. There is always no substitution for a good design brief when inviting tenders from consultants. The same is also true for the quality of drawings, with good and adequate details specification and tender documents for contractors. As the project management manual also gives directions to the management of the project, their careful and thoughtful preparation can hardly be dispensed with.
- 3.4 As the HD has the necessary data, experience and knows the procedure thoroughly, it is suggested that the project managers should take a more pro-active approach particularly in the coordination among the professional consultants, rather than adopting the lead-consultant/sub-consultant systems as widely used in the current practice.

- 3.5 Hong Kong is probably the only place in the developed world to reject housing mortgages on properties above 40 years old. This not only puts tremendous pressure on the need of new housing in both the private and public sectors, but also increases the property prices. The HKIE strongly recommends that a mandatory maintenance scheme in private housing to be introduced to a level acceptable to the banks for mortgage purpose so that the public can own their living unit at an affordable price from the existing private housing stock releasing the pressure on the demand of new public housing.
- 3.6 It is noted that there seems to be little piling defects in the private developments in the Tin Shui Wai area whereas there revealed a number of such problems with the public housing developments in that area. The HKIE recommends that a thorough examination of such possible hidden defects in piling should be carried out at least in the Tin Shui Wai area.
- 3.7 Finally HD should seriously consider making good references to the procedures in the Works Bureau used for the management of construction projects, for the management of consultants and contractors. Indeed Chief Secretary should seriously consider putting the Housing Department under the administration of Works Bureau for works leaving the housing policy to be handled by the Housing Bureau only.