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CM

	CM			CM			
1.							
WBS							
- WBS		N/A			N/A		
-		N/A			N/A		
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2.							
- Milestone (LEVEL I)		N/A			N/A		
- (LEVEL II)		N/A			N/A		
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(Cash Flow Analysis)			N/A			N/A	
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Abstract

Estimate of Construction Project Management Cost Based on Its Functions and Responsibilities

Recently, as an alternative to the traditional design-bid-build contracting system, various alternative project delivery systems have been widely used in the construction industry. Among the various alternative methods, CM (Construction Management) delivery system was first introduced into domestic construction industry in December 1996. However, it has not been widely and used in the domestic public projects due to the lack of concrete and specific guidelines to put the system in operation. Especially, the absence of method for determining the construction management cost and fees has been pointed out as the one of the main reasons for its disuse. In 2001, the Ministry of Construction and Transportation (MOCT) and Korea Institute of Construction Technology (KICT) proposed the specific methodology for determining the cost of the construction management service provided to the public construction projects as a part of the effort to revitalize the use of the CM delivery method.

This research, prior to verification of the validity and reasonableness of the method suggested by the government, defines the structure and components of the construction production system, and identifies the functions of the construction project management and the specific tasks

conducted by each project participants under the various types of project delivery system. Then, identification of the various factors affecting the total construction project management costs and analysis of their relationships are made.

This research establishes the fundamental principle that, in a CM delivery system, the CM contract amount paid to a CM contractor is not the additional cost burden to the owner, but the share of the owner's construction project management cost that already exists as a part of the total project cost. Also, the amount of share in cost should be based on the share of the scope of the work and responsibilities assigned to the CM contractor by the contract.

In order to verify the validity and reasonableness of the method proposed by the government, two comparisons were made, one with the methods developed by the ASCE and another with the actual CM costs analyzed from the number of domestic and overseas projects that CM delivery method were adopted. As a result of comparisons, this research points out that the method proposed by the government has the problem of misleading the industry that CM delivery method results in the total project cost increase and the additional burden to the owner. In addition to that, the various project characteristics including project complexity, facility types, number of contract packages, and etc., which directly affect the construction management cost, are not considered enough in the proposed method. Therefore, when the project size is determined, the allowable range of CM cost fluctuations reflecting the various project characteristics are not large enough to make the realistic compensation for the provided service. Also, even though it's possible to contract for the specific CM functions only, which

depends on the owner's in-house management capability, there is no guideline suggested in the proposed method.

In conclusion, this research proposes the CM function matrix, which can be used to define the work scope of the construction project management required for a specific project and to evaluate the relative weight of the each functions. Based on the analysis result made with the CM function matrix and the scope of the contracted CM work, the share of the total construction project management cost between the owner and the CM contractor can be determined.