RETHINKING CONSTRUCTION MANAGEMENT PRACTICES TO ATTAIN SUSTAINABLE DEVELOPMENT GOALS

(VOLUME - 1)

Chief Editor
Mohd Asim
Assistant Professor, Department of Civil Engineering, Integral University, Lucknow, Uttar Pradesh, India

Scripown Publications
New Delhi

Chief Editor: *Mohd Asim*
Edition: *1st*

Publication Year: *2023*

Pages: *201*

ISBN: *978-93-94375-70-3*

Price: *₹1200/-*

Scripown Publications
2nd Floor, 304 and 305, Pocket - 4,
Sector - 22, Rohini, North West Delhi,
Delhi, 110086, India

CONTENTS

CHAPTER 8

BARRIERS AND OPPORTUNITIES IN ADMINISTERING OFFSITECONSTRUCTION IN LATEST CONSTRUCTION PROJECTS OF LUCKNOW (U.P)

Arichandran. R
M. Tech Research Scholar, Department of Civil Engineering, Integral University, Lucknow, Uttar Pradesh, India

Mohd Asim
Assistant Professor, Department of Civil Engineering, Integral University, Lucknow, Uttar Pradesh, India

Syed Aqeel Ahmad
Professor and Head, Department of Civil Engineering, Integral University, Lucknow, Uttar Pradesh, India

Abstract

Offsite manufacturing Construction refers to the manufacturing, planning, design, fabrication, precast and assembly of the building elements at one location and those elements are shifted to the site and assembled by using crane. In this methods manufacturing teams are produce the product in excellent quality because the works are performed in ground level only, the quality of individual elements and their sizes measured easily. Here is the curing of RCC elements can controlled, there is no high level height of scaffolding work required. The materials wastage is less. The study is performed with reinforcement of piles, pile cap, foundations, columns and beams of RCC elements as per Indian code practices to analysis, investigate & identify the barriers factors during the execution work when individual elements of RCC structure by precast elements, and also identified the opportunities of offsite construction methods to adopt in the building structures or by individuals.

Keywords: Offsite construction, barriers, precast concrete, modular construction, prefabrication.

Introduction

The current population of India is around 1419052026, approximately say 141.90 Crores; May 21, 2023, based on World meter elaboration of the latest United Nations data. India population is equivalent to 17.7% of the total world population. As per the 2011 Census, 30% of India's population lived in urban areas, which is expected to reach 40% by 2030. Urban Housing shortage exists due to a big gap between demand and availability of housing in the cities, both in terms of number and quality. As per the technical study conducted by MHUPA (Ministry of Housing and Urban Poverty Alleviation), the urban housing shortage in India is currently estimated at approximately 19 million. This gap is expected to further widen to an estimated 38 million homes by 2030 largely due to the rising population and increased urbanization. Gradually increase of population and shortage resources like steel, cement, sand, aggregates etc, need of infrastructures and homes are to be made through sustainable construction methods by timely with quality and economically as requirement of the demand, so instead of onsite construction, offsite construction is alternate technology for the best solution for current and upcoming times. Offsite manufacturing Construction refers to the manufacturing, planning, design, fabrication, precast by RCC and assembly of the building elements at one location and those elements are shifted to the site and assembled by using crane. In this methods manufacturing teams are produce the product in excellent quality because the works are performed in ground level only, the quality of individual elements and their sizes measured easily. Here is the curing of RCC elements can controlled, there is no high level height of scaffolding work required. The materials wastage is less. This paper discusses the Barriers and opportunities in endorsing administering offsite constructionin Construction of Integrated New Terminal buildings with elevated road project, at CCSI Airport, Terminal-03, Amousi; Lucknow. This construction project site is approximately 20% works are doing by offsite construction such as RCC Precast girders at elevated road works, Steel Roof Truss at terminal buildings and other miscellaneous works and which all quantities are taken only structure activities except the finishing works.

Literature Review

1. **Authors:** M. Arif, D. Bendi, A. Shawney, & KC Iyer; Paper Title: State of offsite construction in India: Drivers and Barriers; Methodology: This paper presents the perceptions about offsite construction in India and