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RESEARCH ARTICLE

CHALLENGES FACED BY THE CONSTRUCTION MANAGER IN THE CONSTRUCTION INDUSTRY.

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Abstract

Today's construction professionals face a highly competitive global engineering and construction environment that requires a fundamental understanding of management, technology, and finance, as well as business and legal principles. Talented managers know how to avoid costly delays, how to maximize existing budgets, and how to control a project's scope, among other valuable skills. Construction managers plan, coordinate, budget, and supervise construction projects from development to completion. Construction manager will succeed in their job if they can adequately lead their workers to complete the job correctly. By possessing traits such as multitasking abilities, timeliness and good problem solving skills, the construction manager will be able to complete their daily job tasks quickly and efficiently. Construction industry faces many challenges, stemming from a variety of sources. These challenges can have an impact on project success. CMs must be keenly aware of the risks and implications of these challenges. Many of these challenges are a direct result of construction operations, while others are a result of indirect, peripheral activities. Construction issues include workforce considerations, safety, time constraints, and the changing nature of the work itself. Non-construction challenges that CMs face that are part of the business landscape include legal issues, government regulations, environmental concerns, and socio-political pressures. The construction manager will plan, direct and budget a construction project as well as handle any issues which arise during the job. He is the most critical resource in implementation phase of the project. He is supposed to discharge basic functions like organizing, staffing, directing, planning and controlling. A good performance of construction manager is necessary for the growth, development and success of Construction Company. So, this study helps to understand the role of construction manager and the challenges faced by him in the construction industry.

Introduction:-

Construction sector in India is considered to be the second largest employer and contributor to economic activity, after agriculture sector. Construction sector also accounts for most inflow of FDI after the services sector and employs more than 35 million people in the country. 50% of the demand for construction activities in India comes from the Infrastructure sector, while the rest comes from Industrial activities, residential and commercial

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development etc. Indian Construction Industry value is estimated to be more than US$ 126 billion. Construction activities in India are largely fragmented with only about 250 firms employing more than 500 people.

In an increasingly complex world, every industry must rely on the broad-based expertise that carries across all sectors – and the specialized knowledge applicable within that particular field to successfully meet ever-evolving challenges and proactively plan for the future. Consider the construction industry – or this critical focus within multiple industries – and the management needs within that field. Construction management demands an understanding of the essential elements of the business, legal and technical issues experienced in a competitive global environment.

A construction manager wears many hats. They are a supervisor, planner and sometimes worker to boot. This is an interesting job as it requires a multitude of talents to carry out such a role. Construction manager will succeed in their job if they can adequately lead their workers to complete the job correctly. By possessing traits such as multitasking abilities, timeliness and good problem solving skills, the construction manager will be able to complete their daily job tasks quickly and efficiently. The construction manager should be a multitasker. Which help to handle multiple tasks at the same time. A construction manager should be timely in nature. Construction managers should also have excellent problem solving skills which help to solve the construction jobs problems that arise from time to time. The construction manager have many years of construction experience, problem solving should not be a problem for that person. However, individuals who have natural problem solving skills will find that the job role is much easier to fill in the end.

Construction Manager:-
A construction manager is the person who handles a construction job from start to finish. This individual will have a primary hand in planning the job as well as overseeing the project along the way. The managers do not normally, carry out the construction work with their own hand, they are responsible for keeping the project on schedule within the cost project.

Mustapha and Naoum (1998) have investigated factors, which influence effectiveness of site managers. They are of strong opinion that personal variables as a whole have an impact on effectiveness of site managers. The construction manager should also be capable of handling crisis and contingencies at site. Crisis and contingency do arise at construction site. Managers should be well equipped to deal with such emergencies. To deal with such contingencies collective effort is needed. Loose more (1998) has identified effective responsibility and teamwork is the basic managerial tool to handle the crisis.

Objectives of the study:-
To study the role of a construction manager
To study the challenges faced by the construction manager

The Role of a Construction Manager:-
Construction is an activity which goes on in almost every city and town on a daily basis. Something is constantly being built or renovated wherever look. A construction manager is the individual who oversees such projects and ensures that they are completed as per schedule. The following will highlight information relating to the job role of a construction manager and detail the importance of such a position.

General Responsibilities of a Construction Manager:-
The construction manager has some general responsibilities which correspond with the job role. He helps in the acquisition of land, the planning process, obtain permits, hire workers, keep tabs on the progress of the construction job and ensure that it is being completed in a correct manner. The construction manager is also responsible for handling complaints or problems along the way.

Specific Duties of a Construction Manager:-
A construction manager is responsible for a multitude of tasks. One specific duty which construction manager must complete is to look over a proposed project to determine what necessary jobs need to be completed prior to beginning the project. The construction manager must review the project in depth so that he/she thoroughly understands what will be needed along the way. Once the project is reviewed by the construction manager and then aid in the procurement of land for the project site. The construction manager is an important part of this phase to

know what type of land is necessary, the size which is required and so forth. It is important for the construction manager to be part of this acquisition.

Construction managers are also responsible for hiring and supervising workers. The construction workers will be interviewed by the construction manager, hired, disciplined and even fired by him. Any problems that arise with regard to the construction workers will be brought to the attention of the construction manager who will deal with it accordingly.

Construction managers are also given the duty of providing a budget for the construction project. He will detail the costs that will be seen as a result of the project and determine what is in the budget and what may not be and also take various factors into account such as wages and materials, to name just two of the many factors must consider.

A construction manager must also order supplies for completing the construction project. These supplies range anywhere from nails to bulldozers. It is up to the construction manager to shop around for the least expensive yet most reliable materials all the while keeping the project budget in mind. Construction managers will have to handle the contract end of construction projects. He will have to hire individuals to draft the relevant paperwork and ensure that the documents are signed by the right parties. This includes contracts with the subcontractors, architects and suppliers.

An important duty of the contract manager is to manage the construction schedule in an effective and efficient manner. This is crucial as any delays in the project may cause a substantial amount of money. Therefore, the construction manager must ensure that everyone involved does their utmost to stay on schedule and should issues arise it is up to the construction manager to resolve them.

Construction managers must also inspect and review the construction project on a periodic basis to ensure compliance with safety code and building code regulations. This is vital as well since any violation could mean a delay in the project if not cancel the project altogether. Therefore, the manager must be sure to inspect as frequently and efficiently as possible.

A construction manager should be timely in nature. Construction jobs are projects which almost always need to be completed in a timely manner. If the construction manager is a time-conscious individual, then he/she will be able to confidently lead the construction crew so that they finish in a timely fashion.

Challenges faced by the construction manager:-

There are numerous challenges facing today's construction Industry. Some are new to the industry, and some are centuries old. Many of these challenges are a direct result of construction operations, while others a result of indirect, peripheral activities. Some of the construction issues include workforce considerations, safety, time constraints, and the changing nature of the work. Non- construction challenges include legal issues, government regulations, environmental concerns, and socio-political pressures. It is critical that the CM understands the Demanding realities that he or she faces in the planning and control of construction operations.

Nature of the Work:-

Construction is a complex array of interdependent activities. The very nature of construction introduces challenges typically not encountered in other industries. For example, construction differs widely from manufacturing in that:

- the work is often seasonal
- each project is unique
- often involves remote sites with various access problems
- the process is not as predictable
- difficulty in applying automation
- there is high potential for encountering unforeseen conditions
- costs can vary according to conditions
- difficult to manage and supply utilities and other resources.
- technical innovations are adopted slower.
- success is dependent upon the quality of its people.
- very custom-oriented
- product can be of mind-boggling size, cost, and complexity

- the work is not performed in controlled conditions, therefore highly impacted by weather and other environmental conditions

Weather related delays or curtailments are especially unwelcome in today's highly time driven construction environment. Weather is one of many variables that the CM cannot control. The CM must recognize the impact of weather and mitigate the effects whenever possible.

Work Force Considerations:-

As is the case in any business, people are a construction organization's greatest resource. Construction operations depend on the knowledge and skills of people planning and executing the work. The quality of this most important resource: people, is what distinguishes one team or company from another. Having talented management in place to guide and direct operations is crucial. Obviously, having an adequate number of skilled and unskilled workers to perform the work is a bare necessity. Finding and recruiting sufficient numbers of skilled, talented people is becoming increasing difficult. There are several factors contributing to this problem.

Construction is typically viewed as being one of the least desirable industries in which to work. Surveys among the nation's youth show construction at the bottom of the list of professions that they would enter. Construction by nature is dangerous, dirty, hard work. Other industries or professions offer preferred work environments that are cleaner, safer, and generally more desirable. The pervasive growth of technology and the associated industries that have followed are attracting the youth away from traditional industries. Consequently, there is a severe shortage of bright, talented people willing to work in construction. Empowerment leads to high levels of commitment, enthusiasm, self-motivation, productivity, and innovation. Benefits to the employee include feelings of appreciation, belonging, and make decisions for which they are accountable and responsible. Research indicates the level of empowerment does influence productivity. A high level of empowerment yields correspondingly higher productivity. Empowerment of the workforce is one of the keys to improving construction performance. Construction managers need to provide solutions to enhance productivity and ensure safety among the workers.

Safety:-

Construction by nature is inherently dangerous, with a high degree of hazard and risk. The toll of construction accidents is high in terms of both costs and human suffering. Accidents add a tremendous burden of needless and avoidable expense. Financial loses pale when compared to bodily injury and death, and the resulting human, social impacts. Construction accidents add $10billion annually to construction cost. Insurance (such as workmen' compensation) protects the contractor from certain direct expenses, but accidents also involve substantial costs that are not insurable, referred to as hidden or indirect cost. Direct costs include medical cost and compensation. Indirect or hidden costs include:

- time lost from work by the injured party
- loss in earning power, economic loss to injured workers family
- diminished quality of life for the injured party
- loss of efficiency by breaking up crew
- cost to train new or replacement employees
- damage to equipment and tools• loss of production
- cost incurred by delays
- failure to meet contract demands (completion, etc)
- overhead costs associated with disruption of work
- cleanup and repair costs
- administrative costs of investigations and reports
- increased insurance premiums
- loss of future projects due to adverse publicity
- cost of fines
- many, many others difficult to quantify

The CM must be concerned with the issues of safety for several Reasons including:-

1. Legal obligations
2. Contract requirements
3. Direct and indirect financial impact (profit picture)
4. Corporate & personal legal liability (fiduciary duty)

5. Ethical duty and moral obligation
6. Public image and reputation

Time Constraints:-

Time is money to owners, builders, and users of the constructed facility. From the owner's perspective there is lost revenue by not receiving return on investment, cash flow crunch, potential alienation and loss of clients/tenants, extended interest payments, and negative marketing impacts. From the users' perspective, there are financial implications similar to owners. Delays in upgrading facilities translate into operating at below optimum efficiency resulting in higher user cost. Delays in constructing or rehabilitating infrastructure negatively affects businesses and the public at-large. Time implications from the constructor's perspective include liquidated damages (negative) and incentive/disincentive payments. Delays result in extended overhead costs and puts a crunch on critical cash flow. Extending project durations limits the constructor's bonding capacity and ability to bid more work (opportunity cost). Inefficient time management results in higher labor and equipment costs. A reputation for late completions is bad for business, especially in negotiated work. In today's intensely time driven business environment, superior planning, scheduling, and control are vital. Events or conditions that cause delays and require appropriate action include weather, lower productivity than anticipated, delivery problems, resource constraints, changes in scope, and differing site conditions. The CM must manage or mitigate these situations in order to deliver a constructed project on time. Time is of the essence!

Environmental Issues:-

The impact of environmental issues on construction has been escalating since the 1970's. Today, owners and constructors are bound to clearly defined duties and liabilities regarding the environment. Nearly all segments and sectors of the industry are affected by one or more environmental issues. Strict regulation, permitting requirements, and enforcement are designed to protect human health and the natural environment. Failure to comply with environmental regulation can result in project delay or termination, disqualification from future work opportunities, fines, civil action, and even criminal prosecution. It is paramount that construction industry has full knowledge and understanding of environmental regulations and permit requirements. Major Federal regulations that apply to construction activities include the *Federal Water Pollution Control Act (Clean Water Act), Clean Air Act, Resource Conservation and Recovery Act,* and the *Comprehensive Environmental Response Compensation and Liability Act*. Individual states, counties, and municipalities have laws that supplement or are even more stringent than the Federal regulations. It is important that owners recognize their cradle-to-grave responsibilities. Environmental concerns that impact construction include erosion and sedimentation control, wetlands and parklands, leaking underground storage tanks and contaminated soil, lead paint removal, asbestos, hazardous waste, dust control, and noise. All of these concerns increase the organization's risk. Environmental concerns that impact construction include erosion and sedimentation control, wetlands and parklands, leaking underground storage tanks and contaminated soil, lead paint removal, asbestos, hazardous waste, dust control, and noise. All of these concerns increase the organization's risk, which the CM must address and effectively manage. Ignorance of the law is no excuse and can place the project, owner, constructor, and CM in jeopardy.

Legal Issues:-

Businesses across the board are at great risk because of liability and other legal implications. Not many industries are exposed to greater risks from legal issues than the construction industry. Construction business is conducted through contractual arrangements that at times results in disputes. Claims and disputes have been steadily on the rise for years. A claim is a request by a contractor for additional compensation or time extension for occurrences beyond the contractor's control. The contractor must prove entitlement and quantify the associated damages. Timely notice of claim upon discovering impact is required. The owner has a duty to provide adequate, accurate data to the bidders, and is liable to the constructor when inaccurate data are given, extras develop because of improper design, or the design is significantly changed after the contract is signed (constructive change). Change in scope and differing or unexpected site conditions are grounds for a claim. The various types of claims include delay/disruption, extra work claims, acceleration, impossibility-of-performance, defective design (error or omission), interference, and superior knowledge claims. The industry continues to seek less adversarial methods of resolving disputes and settling claims. The motivation is to reduce costs by equitably resolving issues before they escalate into litigation. The CM plays a central role in claims avoidance and resolution.

Governmental Regulation:-

Increasing government regulation is another of the challenges facing today's construction industry. Along with increasing environmental and safety laws, the industry is coming under greater regulation through the construction codes and licensing requirements. State and local municipalities adopt model codes such as the Basic/National Building Code (BOCA Code), Uniform Building Code (UBC), or the Standard Building Code (SBC). The International Building Code 2000 (IBC) now replaces the first three codes. Other important model codes include the National Electric Code (NEC) and Life Safety Code by the NFPA under ANSI. These codes provide for public safety by establishing minimum construction standards for structural integrity and fire safety. Local building codes are based on one of the model codes, but often include modifications that are unnecessarily restrictive. Some local codes are outdated and obsolete and prohibit the use of often superior, cost-effective materials and systems. Permitting requirements, contractor licensing laws, and the associated cost are also escalating. Quality of code administration is also a concern as are the delays caused by waiting for inspection. Public works projects that receive Federal or State funds are also subject greater process and administrative regulation. Timely resolution of issues is often entangled in bureaucratic red tape.

Socio-Political Pressures:-

Socio-Political pressures have more impact on construction than in the past. Political pressures and community involvement affect public and to some extent, private sector work. Pressures emanate from adjacent property owners and the public at-large, including existing businesses, institutions, and residences adjacent to the constructed facility. Civic organizations and community groups have more input into design and construction of public works projects, and greater impact on private work through the land use and planning process. The community has greater input through citizen advisory boards that are engaged during project initiation, design, and construction. Today's CM has substantially greater accountability to the public than previous generations.

Conclusion:-

A construction manager wears many hats. They are a supervisor, planner and sometimes worker to boot. This is an interesting job as it requires a multitude of talents to carry out such a role. CM should have telescopic as well as microscopic vision on each and every step of construction operation, right from preliminary estimates and various types of costs to the final inspection and payment. Construction industry faces many challenges, stemming from a variety of sources. These challenges can have an impact on project success. CMs must be keenly aware of the risks and implications of these challenges. Many of these challenges are a direct result of construction operations, while others are a result of indirect, peripheral activities. Construction issues include workforce considerations, safety, time constraints, and the changing nature of the work itself. Non-construction challenges that CMs face that are part of the business landscape include legal issues, government regulations, environmental concerns, and socio-political pressures. Excellent CMs value the people they employ and work to ensure their safety and promote their well-being. Excellent CMs proactively manage operations to achieve the project's quality, cost, time, and scope requirements. The excellent CM strives to avoid and resolve conflict and promote harmony among all project stakeholders. The excellent CM adapts to the changing business, social, and legal environment, and leads the organization through the challenges it faces.

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