

Job Description

Name:

Institution Affiliation

Job Description

Summary

A construction engineer plays a vital role in construction projects, owing to the immense amount of duties and responsibilities bestowed upon them. Should they prove to be inefficient in their jobs, it could result in detrimental impacts on their projects overall. For this reason, it is important to properly understand what working a construction engineer entails. In so doing, a potential employee can adequately appreciate what is expected of them, and a recruiter is also in a better position to know what to look out for when recruiting construction engineers. In the subsequent sections, the responsibilities and requirements associated with the aforementioned job position as well as similar job posts will be explained in detail.

RESPONSIBILITIES

The following are the responsibilities that are expected of a construction engineer:

The engineer is expected to focus on highly specific, and often various, types of projects.

The most common types include building, electrical, mechanical and highway projects.

Building projects are often comprised of the construction of commercial houses, while highway projects involve the establishment of highways and means of public transportation.

Just as is the case with most tasks, the construction engineer is also responsible for planning for their projects, especially from the perspective of design. They are tasked with preparing and analyzing designs for their projects, something that they cannot achieve without having certain requisite skills and abilities.

They work with a project manager with the aim of establishing and abiding by the lifecycle of their projects. Throughout every phase of the lifecycle, they are responsible for documenting all the processes and instances of progress that occur, as well as preparing controls for them.

They also work with the management team by offering technical support. Seeing as they understand the projects' designs better than the management personnel, they are in a better position to follow up on activities such as quantity surveys, the establishment and maintenance of vendor relationships, and compliance affairs.

The engineer, besides prescribing a lifecycle for their projects, also generates a work schedule for them and helps in assigning tasks to the parties involved. Furthermore, they also determine the physical layout for the activities.

The construction engineer is also responsible for applying their expertise to ensure that they meet all regulatory and compliance expectations. Moreover, with their expertise they can advise those concerned on the kinds of materials to procure, and also prepare well-informed appraisal reports on their projects.

They also ensure that they incorporate quality management objectives, in that the projects meet quality standards, and improve upon it if possible. A good example of how they achieve this is by seeing to it that they acquire high quality materials and designs prior to the commencement of the projects. They also prepare reports that comment on any progress made with regards to them.

They offer technical support by interpreting catalogs, vendor plans, and contracts. In addition to this, an engineer also helps in resolving any issues that may arise from the contractors and suppliers.

They keep abreast of the latest trends and changes in the engineering field, especially when it comes to issues pertaining to affairs of compliance, regulation, and quality management. By doing this, the engineer is able to refine the service they offer accordingly and within legal bounds.

They also liaise with the project's management team to determine ways of cutting back on costs. Cost savings are attainable through a special focus on vendor relationship management and addressing bottlenecks in production.

Lastly, the engineer is expected to show up to and participate in administrative meetings on a regular basis.

REQUIREMENTS

Academic (knowledge) qualifications – It is important that the engineer attains the minimum required engineering degree qualifications as proof that they have indeed been exposed to and mastered engineering concepts and are ready to apply them to real-world scenarios.

Problem-solving skills – It is quite essential that the engineer possesses strong problem-solving skills. These influence their creativity levels and decision-making capabilities, especially when the engineer is faced with challenging scenarios in their line of work. Problem-solving enables them to develop strategies, generate diagnoses and routines, as well as interpret problems and prospective solutions in the real world.

Management and leadership skills – It is quite likely that the engineer will have to work within a team at some point in their career. More so, it is even more likely that they may have to lead the said teams. With that in mind, the engineer needs to have impeccable management and leadership skills. Not only does this enable them to work with different people with varying personalities and backgrounds, but also empowers them to motivate their teammates, convey constructive feedback to them, and professionally discipline them when need be.

Analytical abilities – A great engineer should be skilled at adequately exercising inquisitiveness throughout their projects' lifecycles, so as to devise reliable means of making the project better and reducing the complex nature of problems that occur.

Communication skills – As hitherto mentioned, the engineer has to constantly liaise with several other parties, namely the management personnel and the vendors, in order for them to adequately perform their roles. That said, it is imperative that they possess great communication skills so that they can engage in meaningful conversations, which often give rise to ideas for possible solutions, with other project stakeholders.

Critical thinking – The engineering sphere is among the most complex fields of study. The problems that the discipline seeks to solve are often quite challenging and require extensive critical thinking skills. That requires a rather precise form of thinking, the kind that enables them to apply varying concepts to solve the problems they encounter.

Negotiation skills – As mentioned earlier, the engineer is responsible for creating relationships with the vendors and liaising with the management to initiate cost-saving objectives. By being a negotiator, the engineer is not only able to negotiate great deals

with vendors to achieve cost cuts and quality management goals, but also to manage conflicts occurring within their teams by playing the role of a mediator to solve the rift between the conflicting parties.

Time-management – Most construction projects, especially the complex ones, are time-sensitive and often tied to strict budgetary constraints. When strict deadlines and project targets are in play, time-management skills come in handy.

Interpersonal skills and Team-player abilities – It is essential that the engineer be capable of working well in collaboration with their teammates. Being a team player means appreciating the fact that every person is capable of bringing something different to the table, and leveraging this variety as a means of embracing diversity and new ideas as well as perspectives.

INTERVIEW QUESTIONS FOR CONSTRUCTION ENGINEERING

1. What does your job generally entail?

Working at FEWA has enabled me to apply my construction engineering skills to aid in the availing of water and electricity resources to the community. With that in mind, my job entails planning, designing, and overseeing the implementation of projects.

2. What has your experience as a construction engineer been like so far?

It has been quite inspiring and challenging at the same time. However, it has enabled me to grow both personally and professionally.

3. Would you say that your job is fulfilling?

My job is indeed fulfilling, as I get to practise the skill that I am most passionate about, that is, engineering. It keeps me on my toes in the sense that it challenges me to be a problem-solver and a critical thinker on a regular basis.

4. What is the best part of being an engineer?

I get to apply my expertise and technical skills in constructing new infrastructure which, in one way or another, enhances the wellbeing of society.

5. What would you say has been your toughest experience as an engineer?

I have had to learn so many new engineering concepts from a practical perspective while on the job, and this has been quite challenging, especially in scenarios where the applicable concepts are those that I had a hard time grasping during my coursework in the university.

6. Could you describe what a typical day as a construction engineer would be like?

A typical day for me would entail roaming construction sites with blueprints in hand, ensuring that targets and budgetary constraints are being met, and that every team-player is doing their job well.

7. How would you describe your work environment?

My work environment is engaging, highly inquisitive, and hands-on in the sense that whenever I am on-site, I am rarely ever free.

Methods

The section contains job descriptions for two engineering positions that resemble that which has been discussed in this paper:

A. Civil Engineer

Civil Engineer with NEBOSH Jobs in Fujairah - United Arab Emirates

SAVE

Fujairah

United Arab Emirates (+3 others)

1 day ago Full-time

skills: Location: Fujairah - United Arab Emirates Function: Engineering Industry: Construction / Civil Engineering Experience: 4 - 5 Years Deadline: 2020-03-28 We are Fujairah based Construction and Maint Company required 4-5 years UAE experienced Civil Engineer with NEBOSH certificate Familiar with all type of construction work Project management and supervision skills Strong communication and interpersonal skills Candidate should have knowledge of preparing tenders, Examine materials and work in progress to ensure compliance with the specified requirements Assess and apply project HSE plans as well as method statements Manage the project activities in line with the approved budget Autocad is an added advantage

Summary

As Baveystock (2013) explains, there is more to civil engineering than the construction of large and picturesque buildings. Civil engineering is also about maintaining and adapting the infrastructure that we depend on daily, such as bridges, energy supply, and waste networks. It is up to the civil engineer to maintain these infrastructures while factoring in such challenges as population growth, climate change, and natural disasters (Baveystock, 2013). Onet (n.d.) adds that the engineering duties in this case entail planning, designing, and following through on construction as well as the maintenance of structures such as those mentioned hitherto. They devise solutions to some of the most common complex challenges facing society today.

Responsibility

Specializing in either environmental, geotechnical,, municipal, or transport civil engineering (Baveystock, 2013).

Engage in construction projects and prepare designs and specifications for them.

Test soils or resources to ascertain the adequacy and strength of foundations and materials (O*Net Online).

Establish project costs by analyzing the costs of resources such as labor and materials.

Study concepts and models to enable them to design projects.

Apply their expertise and conceptual skills when designing blueprints, maps, and drawings for their respective projects.

Develop specifications, plans, and schedules for their construction projects.

Further operations by following through on policies and procedures.

Depending on whether the engineer is a consultant or a contractor, their tasks vary in the sense that while the consultant is often confined to office duties, the contractor is more involved with overseeing physical construction activities and sites (Baveystock, 2013).

Fulfill any project requirements and targets set for them.

Use their technical expertise to offer answers to any questions and requests brought to them.

According to Hiring Monster (n.d.), the engineer maintains a database of their projects, where they write their programs and input data which they regularly keep backups for.

Take the initiative of complying with all legal requirements that govern how they are to conduct their projects.

Work with the management team from an advisory perspective, as they offer their technical input to influence the management's leadership outcomes.

Requirements

They should possess a Bachelor's degree in civil engineering or architecture.

They should have technological skills illustrating their mastery of analytical software such as HEC-HMS and the use of computer-aided design CAD software (O*Net Online).

They require design and conceptual skills, which enables them to prepare layouts for their projects.

The civil engineer should have mastered mathematical concepts in the fields of statistics, algebra, and calculus (O*Net Online).

They are required to be proficient in CAD and AutoCAD (Hiring Monster).

They require eight to ten years of experience in the engineering or architectural fields of study.

Planning skills enable them to smoothly establish and follow through on project schedules.

Problem-solving and critical thinking skills enable the civil engineer to solve any problems they encounter while on the job.

B. Product Engineer

Product Engineer Jobs in Dubai

SAVE



Sika Arabia

Dubai - United Arab Emirates

8 days ago Part-time

skills: product engineer Location: Dubai Function:IT Software - Mobile Role: Product Engineer
 Industry: Food Processing Experience: Fresher Deadline:2020-03-21Role Mission of Function The
 Product Engineer Waterproofing is the qualified person responsible technically for their assigned
 Products and Systems, including the Product Management over the entire life cycle of a product
 Objectives of Function Technical realisation and documentation of Product Developments within the
 designated Application Fields Maintenance and Improvement of the Product range (ensuring the
 state of the art in both the products and their application) Technical and Marketing support for Sika
 Companies (trainings, product launch packages, project support) Monitoring of competition, market
 and technology trends Evaluation of new technologies inclusive feasibility studies and feasibility
 testing Areas of Responsibility Task The PE leads assigned product development projects (acc to
 PCP process), evaluation processes of third party products (TPP) and establishes maintains
 marketing- and technical documentation (Product Data Sheets, Method Statements, Technical Lead
 Articles etc) The PE is a part-time member of the CET responsible for their products Responsible for
 all of the technical aspects of products and their application including train the trainer activities The
 PE is responsible for providing technical support to the sales organizations (major-complex projects,
 claims)Documentation of reference projects (reference list , Sika at Work)Supporting with market-
 and competitor analyses, The PE defines bench marks and monitors market trends Monitoring of
 business activities concerning their product range The PE fully understands how to use and apply
 the products in their product range and therefore they have to visit specific job sites at least 2 to 5
 times every year Within n their areas of responsibility they represent the interests of Sika in
 International Associations and other relevant organizations Positioning (4Ps) product range,
 optimization of product ranges (synergies)The PE collaborates with the respective Quality Control
 Departments and agrees appropriate action in any instances of off-spec materials production
 Requirements Professional engineer (degree in civil engineer), minimum 5 years experienced in
 construction business Good standard of English (verbal and written)Project lead function Specific
 know how of their Application Field Personal development skills Reporting skills

Summary

According to Design Tank (2014), the product engineer is mainly responsible for designing and creating products based on the requests of customers while under the supervision of the sales department. The engineer works alongside factory staff to prescribe methods and assign materials for use during the design and manufacturing of the products in question (Design Tanks, 2014). The outcome is that new products emerge consistently, and these are added to the entity's portfolio, thereby driving its sales and profitability growth. It resembles construction engineering in that both entail designing and building something new from scratch.

Responsibility

Designing products and developing product families (Design Tanks, 2014).

Ensure that during the manufacturing process, the project's resources, namely labor and materials, are efficiently utilized.

Aid in the procuring and selection of materials.

Outsource expertise whenever product issues arise, in a bid to solve or eliminate these issues. They also do this to ensure efficient quality management when it comes to the products' designs and performance.

Requirements

Should be able to read, write, speak, and understand the English language (Design Tanks, 2014).

Must display an adequate mastery of engineering concepts and procedures.

Should be creative and critical thinkers that display flexibility in their duties.

Need to have great interpersonal skills, which enable them to relate well with their projects' stakeholders, namely the customer, the sales department, the vendors, and the factory personnel.

Ought to rely on experience and good judgment as a foundation for establishing and following through on their product creation goals.

References

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