

INTRODUCTION

The Construction industry involves the participation of significant numbers of people and sectors of the economy. There are varieties of factors that affect the relationships of the participants. These include the length of the project, its nature of outside organization, its size and the fact that the price agreed and the amount of work done may change as it proceeds and it is risk associated. Due to these factors the participants in the industry goes to their benefits

This PROJECT is about on the sub-contracts in the construction industry. this project contains four chapters.

The first topic or chapter is about The second topic or chapter is about

The third topic or chapter is about detail The fourth topic or chapter is about different specific clause in listed case.

1. What Are Subcontractors?

Subcontracting is the practice of assigning, or outsourcing, part of the obligations and tasks under a contract to another party known as a subcontractor. In most cases, a company subcontracts another business to perform a task that cannot be handled internally.

In the construction business, a general contractor typically organizes several subcontractors that specialize in specific trades. Subcontracting is especially prevalent in areas where complex projects are the norm, such as construction and information technology. Subcontractors are hired by the project's general contractor, who continues to have overall responsibility for project completion and execution within its stipulated parameters and deadlines. This can create a subcontractor risk for compliance. Subcontracting is very useful in situations where the range of required capabilities for a project is too diverse to be carried out by a single general contractor.

A subcontractor is a type of contractor who works in a specialized area and could be a freelancer, independent contractor or vendor. While the contractor maintains relationships with clients (e.g., corporation or government), the subcontractor works with a contractor, providing his or her specialized skill set in exchange for a contractual fee. The subcontracting individual or company reports to the primary contractor, who is responsible for managing the contracted work from initiation to completion. Subcontractors can be anything from an individual self-employed person – eg a plumber carrying out work for a building contractor

- to a large national organization. A subcontractor has a contract with the contractor for the services provided - an employee of the contractor cannot also be a subcontractor

A subcontractor agreement is a contract primarily between a builder or a principal contractor and subcontractor. It outlines the perimeters of specialist work to be done for the construction project. Subcontractors undertake a contract from the contractor. Subcontractors undertake work that a contractor cannot do but for which the contractor is responsible.

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Subcontractor Example

For example, a building contractor may hire a subcontractor to complete the electrical wiring part of the contractor's building job. The contractor is responsible to the client for the building job including the part performed by the subcontractor.

Subcontractors might work on task-based contracts with no fixed date, long-term arrangements which can be discontinued at any time, or fixed-term contracts.

1.1 Why Subcontract is carried out

There are several reasons why subcontracting is carried out. Subcontracting is very useful in situations where the range of required capabilities for a project is too diverse to be carried out by a single general contractor. In such cases, subcontracting parts of the project that do not form the general contractor's core competencies may assist in keeping costs under control and mitigate overall project risk. It may even grant some defense in a via major situation.

Also, some large government contracts or contracts that impact local community development may require the primary contractor to hire a certain number of subcontracting entities from the community as part of the contract. Additionally, a business may decide to subcontract some mundane but necessary jobs to free up time and resources to attend to other profitable undertakings. Finally, it is less expensive for a contractor to hire the services of a subcontracting firm or freelancer than it is to hire an employee, since the primary contractor is not responsible for paying workers' compensation benefits, vehicle and general liability insurance, health insurance, full-time salaries, and Social Security taxes for independent contractors or subcontractors. A self-employed individual or company who wants to run a subcontracting business must be properly licensed in his or her home state as a limited liability company or corporation. In order to be given a subcontract, the business must be in good standing with its home state stipulations, such as having an up-to-date file for its tax returns. For tax purposes, a subcontracting company is required to register with the Internal Revenue Service (IRS) to receive an Employer Identification Number (EIN). The EIN will be used by the primary contractor to report to the IRS all business income paid to the subcontracting company.

1.2 How Subcontracting Works

Using the construction industry as an example, when a government body or a company wants to build or make repairs to infrastructure, it would usually award the contract for the job to a contractor. The contractor is a business owner who negotiates the deal and works on a contractual basis for an agreed-upon fee. Sometimes the work to be done is in a specialized field, which requires the contractor to contract out to another party. In this case, the contractor will be subcontracting the work to a subcontractor

1.3 Types of Subcontractors in Construction

1.3.1 Plumbing, Heating, and Air-Conditioning

One of the types of subcontractors in construction is plumbing, heating, and air-conditioning. These subcontractors or specialty contractors are also known as mechanical contractors when they can do work on all three. Contractors sometimes choose to specialize even further in plumbing or heating and air conditioning or cooling. Specialty contractors that specialize in heating and air conditioning are known as HVAC contractors. Plumbing, heating, and air-conditioning is an important subcontracting type in construction.

1.3.2 Painting and Paper Hanging

Another of the types of subcontractors in construction is painting and paper hanging. Painting and paper hanging is a type of specialty trade that primarily engages in painting and paper hanging. So they might paint bridges, electrostatic, and more. According to OSHA, businesses that are classified as painting and paper hanging don't engage in roof painting. Roof painting is a separate trade from painting and paper hanging. As a whole, the industry is of great value to every project.

1.3.3 Electrical Work

Electrical subcontractors are a broad type of subcontractors in construction. There is a lot that an electrical subcontractor could work on. OSHA defines electrical subcontractors as those that work on electrical work at a site rather than in a repair shop or similar. Electrical

subcontractors might be fire alarm installers, work in telecommunications equipment and installation, or even what most people would think of for electrical work. There is a lot that an electrical subcontractor might work on.

1.3.4 Masonry, Stonework, Tile Setting, and Plastering

OSHA classifies these four types of subcontractors in construction under one umbrella. However, it does divide further down in order to be more manageable. It can include masonry, stone setting, plastering, drywall, insulation, and even more. Plastering, drywall, and insulation are important to most building types since most buildings have a layer between the exterior walls of the building and internal sections. These types of subcontractors in construction build a lot of the projects from foundations to finishing touches.

1.3.5 Carpentry and Floor Work

Carpentry and floor work are crucial types of subcontractors in construction. Carpenters can build and install cabinets, but they also work in joinery, garage doors, framing, and doors. Often times they'll be responsible for all trim and finishes in the project. Since flooring is always important in every project, these subcontractors will be seen on most sites. Knowing that the flooring is correctly installed and the project's needs taken into account make flooring subcontractors so important.

1.3.6 Roofing, Siding, and Sheet Metal Work

Roofing, siding, and sheet metal work specialty contractors are important types of subcontractors in construction. These subcontractors can hold a variety of jobs. From working with architectural metal to skylight installation. They're responsible for the roofing, gutter installation, possibly ductwork installation or fabrication. Roofing, siding, and sheet metal also

sometimes will fabricate the pieces themselves. With more industrial spaces and changes in design, roofing, siding and sheet metal work will be busy fields of subcontracting.

1.3.7 Concrete Work

Concrete contracting is one of the large types of subcontractors in construction. These specialty contractors can work on a variety of projects. Some will be concrete finishers, work primarily with foundations, or work primarily in asphalt. All of these types of concrete specialists fall into the concrete work subcategory in OSHA also under the same subcategory in other government fields. According to the Bureau of Labor Statistics, it's a fairly popular field with an opportunity for growth.

1.3.7 Special Trade Contractors

Glass and glazing work, excavation, demolition, steel erection, and more are lumped into special trade contractors. Ironworkers, excavators, and the like are also experiencing growth like other fields in the construction industry. Some of the special trade contractors make more and have greater growth at this moment over others; however, with the construction boom, many of the fields are growing larger.

1.4 Type of Sub Contract

1.4.1 Domestic Sub-Contractor

A Subcontractor is chosen and engaged directly by the main Contractor. Main contractor can appoint a sub-contractor for (a) Supply & installation Works or (b) Installation only. Conditions of contract require the main contractor to notify the engineer (consultant) of the extent of work to be subcontracted and the names and address of each subcontractor. The Engineer has the right to object to the employment of any sub-contractor.

1.4.2 Nominated Sub-Contractor

A Sub-contractor is chosen by the Architect or Engineer to carry out specialist work. They are appointed on the expenditure of a Provisional Sum or Prime Cost Sum included in the Bill of quantities. The nominated sub-contractor enters into a contract with main contractor, but there may be a collateral warrantee between the nominated sub-contractor and the client.

1.4.3 Named or Listed Sub-Contractor

In these circumstances the Architect may provide the main contractor with a list of at least three sub contractors to choose from for carrying out particular part of the project. The main contractor can add to the list, but in any event the Sub-contractor is a domestic subcontractor under the contract.

1.4.4 Work Package Sub-Contractor

It is a type of domestic Sub-contractor but, might also imply responsibility for a specific section or package of the works, possibly including design work with little or no reliance on main contractor attendance to provide complete services.

1.4.5 Labor Supply Contractors

In this type, main contractor just hiring people from small labor supply contractors to carry out the works agreed by main contractor. It is considered after analyzing the drawbacks and risks of recruiting.

1.5 Advantages and Disadvantages of Using a Contractor or Subcontractor

When the business may need additional resources to carry out specific or specialist tasks. The client may want to use the services of a contractor or subcontractor for this, although it is important to weigh up the advantages against the disadvantages of contracting and subcontracting.

1.5.1 Advantages of Subcontracting

- You can hire a subcontractor when you need more flexibility with a specific job or task.
- You can use a subcontractor for one-off jobs and jobs requiring specialist expertise or fast turnaround.
- Using subcontractors enables your permanent staff to concentrate on the core business.
- Some subcontractors can start the work or project at short notice, even when large numbers of workers are required.
- You can often specify the type and duration of contract you need for the contracted job.
- You have no PAYE or National Insurance contributions administration for contractors and/or subcontractors.
- Contracting and subcontracting allows you to obtain temporary cover for a permanent staff job or work that needs doing.
- Main contracting firm can hire a Sub-contractor when he needs. This provides more flexibility on works. Some Sub-contractors can start work at short notice, even when large numbers of workers required.
- Main contractor can use a Sub-contractor for one-off jobs and jobs requiring specialist expertise or fast turnaround.

- It helps to main contractor to concern in core aspect of the project which aid to deliver the project at high quality. Main contractor need not worry about PAYE, insurance and contribution

1.5.2 Disadvantages of Subcontracting

- Subcontractors may cost your business more than the equivalent daily rate for employing someone.
- By relying on contractors and/or subcontractors, your business does not acquire or develop skills in-house.
- Permanent staff may resent contractors being paid more money for doing similar work to them.
- If you use a contractor that then uses a subcontractor, you have no direct control over the quality of subcontractors' work.
- Contractors and/or subcontractors may not appreciate your business culture and may lack the motivation and commitment of permanent staff.
- Workers can be employees or subcontractors of the contractor - you need to understand relevant tax implications and other rights.
- Sub-contractors may cost the main contractor more the expected. In other words, it makes a reduction on the initial profit margin of the main contractors.

- By relying on Sub-contractors, main contractor does not acquire skills or develop skills in house staff. This will hurt the main contracting firm for sustainable growth in the longer term.
- Permanent staff may resent sub-contractors being paid more money for doing similar work to them. This leads to the threat of loss of intellectual capital of main contractor. Sub-contractors may not appreciate the main contractor's culture and may lack the motivation and commitment of permanent staff.
- Main Contractor may not have direct control over the quality of Sub-contractors work.
- It is recommended that before to appoint any kind of sub-contractors, a detail analysis on their industry back ground is necessary to avoid issues in future.

1.6 Risk Management and Risk in Construction

Risk management in construction projects is an essential component of project management. Without proper risk management, subcontractors have a lot to lose. There are many different types of risk to look out for, but here are some of the more common types of risk in construction.

1.6.1 Supply Chain and Operational Risk -

Subcontractors and General Contractor's alike experience supply chain and operational risk. There could be a natural disaster or force majeure that reduces available supplies or prevents owner specified items from getting to the site on time. These risks are hard to predict and can be hard to manage.

1.6.2 Technical Risks -

Technical risks are anything that restricts the product creation your customer wants. This can include the above risk as well as other factors.

1.6.3 Logistical Risks -

These are risks that should be addressed and prepared for before the project starts. These can include equipment availability as well as transportation.

1.6.4 Environmental Risks -

Environmental risks are the factors that prevent the project from completion on schedule or cause rework.

1.6.5 Management Risks -

Management risks are risks that arise from management issues whether someone didn't hire enough staff or confusion over responsibilities and duties.

1.6.6 Financial Risks -

These risks are fairly straightforward. These are risks like inflation, taxes, and more that can change rapidly. Different states and even cities have different taxes and other fees that can cause problems for a project.

While this list of risk isn't comprehensive, it goes to show that there are many different types of risks that contractors have to be careful of when they are putting together their project management and risk management plans.

1.7 Other Ways of Different Ways That Subcontractors Can Mitigate Risk On Their Projects

1. Be Aware of Risks before Tackling a Project

The very first step that a subcontractor must take before tackling a project is the identification of possible risk factors. Without a risk identification step, subcontractors can't create a plan to manage them.

2. Prioritize risks

Although all risk is important, subcontractors must allocate their resources appropriately toward mitigating the risks that are most critical to a project. To do so, a subcontractor must rank these risks according to two criteria: the likelihood of it occurring and the level of impact it would have on the project. Once the risks are ranked accordingly, subcontractors will be able to assign the highest priority to certain risks that ranked high on both criteria.

Once a subcontractor's risks are a physical risk identified and prioritized, two main kinds of risks that can be easily avoided with project management and document control software: occupational risk and financial risk.

An occupational risk is the physical risk to workers from internal or external conditions. Occupational risk can be avoided by improved communication methods and creating standardized procedures for all team members both before and throughout a project life cycle.

Financial risk is the risk to profitability that subcontractors face by going up against project delays and manual errors. Financial risk can be prevented by keeping better track of projects and using project management software to improve accuracy.

3. Set up Standard Steps and Procedures

Risk mitigation techniques are not one size fits all. There is no universal list of risks or steps that are suited for every subcontractor. Each company needs to have its set of measures in place intended to mitigate risk. There are software options in place that will aid in creating standardized procedures unique to each company. The subcontractor can take his knowledge and the aid of a project management and document control tool and create a process that will be useful across the board. After all, nobody knows the risks specific to your project better than you.

4. Communication throughout the Project Life Cycle

Communication is vital in both the risk avoidance and risk response phases. In the avoidance phase, it is a tool to communicate the perceived risks to all team members and explain the steps that must be taken to avoid them. During the project, communication devices can provide a way to get help immediately should a risky situation arise or should someone suffer an injury.

5. Training New and Old Employees

It is a common misconception that training need only take place in the initial on boarding process. However, training can be a useful tool for all employees, no matter how long they have worked for a company. It is a way to brief all staff about the new process and ensure that nobody is deviating away from the set procedures.

6. Sometimes There Is Risk in the Reward

A risk is not always negative if it's handled properly. If subcontractors are always turning away projects due to risk, then they are missing out on financial gain. Subcontractors must be able to properly assess the risk of a project and be able to control it. Once a subcontractor can do these things,

it can take on riskier projects that will lead to higher profitability and more projects in the future.

7. Keep All Documents in One Place

Implementing a project management and document control tool will allow you to keep all documents, reports, emails, etc. in one place where they can be indexed and easily accessed at any time. This will significantly improve financial rewards and protect against litigation because it will allow the subcontractor to keep better track of the projects and keep more detailed and organized records that cannot be disputed.

8. Integration of Applications

It is helpful for project risk mitigation to have all of a subcontractor's applications integrated into one platform. This allows subcontractors to avoid manual re-entry of data into different applications and runs down the risk of a mistake. Integrated platforms prevent duplicate data entry and create an easy trail of information.

9. Constant Quality Assurance

An important step in the risk mitigation process is regular quality checks. Even when risks are identified, there are always opportunities for things to go wrong. Or if there is a plan in place, unexpected risks can occur as well. Because of this, someone needs to be in charge of checking for quality in a systematic and standard way. Some project management and document control solutions offer checklists. These can aid in this process by creating a list of quality assurance steps. Another benefit of project management and document control that comes in handy is its capability for a quick response. If an unexpected risk occurs, the workers on the field will be able to communicate with all members of the team and collaborate to resolve the issue in real-time when the costs are significantly less.

10. Create a Sustainable Practice

Once you have a risk management solution that is suited for your company and adapted to each project, the subcontractor must make sure that this procedure is sustainable and that these efforts continue to be made as time goes on.

1.7 Greatest Challenges Facing Construction Subcontractors

Many pain-points of the subcontractor have been around for years, while many are just now surfacing. No matter the age of these issues, they are here and will effect the way subcontractors conduct business. Subcontractors face both internal and external pressures during their job and must react to both. They are responsible for their team and the general contractor as well as any outside pressures such as the environment, the law, and the government.

1. Worker Shortage

The worker shortage continues to be problematic as project demand increases. This has caused great concern for contractors and has lead to them changing their companies regarding pay, training, and technology to attract new talent. The construction industry is becoming less desirable to the youth that is entering the workforce. Less and fewer millennial are studying a vocational trade, such as construction, as many are being pushed toward traditional higher education.

The construction industry needs to partner with high schools and vocational schools both to recruit potential candidates but also to remind young

students that construction is a viable and lucrative career path. Along with this, subcontractors should amplify promoting internships or apprenticeships to get young people involved. These are great ways for a company to test out a prospective employee before hiring him full-time, while also providing the apprentice with hands on experience. Subcontractors will be able to use their relationships with surrounding schools to promote and recruit for these internships.

2. Time Constraints

As projects continue to be available and are becoming increasingly more sophisticated, subcontractors are struggling to stay on schedule. Many have taken steps to combat this issue by utilizing project management technology that allows them to save time during the project by streamlining everyday processes. Streamlined communication, real-time data entry, and easy to use field solutions have trimmed the fat on construction projects, allowing subcontractors to do more with less.

3. Government Regulation

Regulations are ever changing, which makes it difficult for the subcontractor to constantly stay up-to-date to ensure he is working within the appropriate rules. Subcontractors must continually be keeping up with blogs and publications from the construction industry to ensure they do not miss any news that will affect their business. Not only do the subcontractors have to spend time keeping up with the regulations, but must also devote time in the field to comply with the regulations which in turn incurs extra costs. Mobile technology will allow the subcontractor to cut back on time in

other areas, so these new government regulations will not cause them to fall behind schedule.

4. Trouble Getting Paid

As a subcontractor, your paycheck is only as good as your record keeping. Without detailed and accurate documents, the subcontractor may face trouble collecting the money his time and labor. This is why it is so important to keep accurate records, but also keep those records organized in a single place where they can be easily accessed from the field, updated and sent out at any time.

5. Lack of Communication

Communication is the backbone of all efficient operations. Without communication, nobody can work together. Therefore, improving communications can massively streamline operations and improve accuracy. The use of mobile and cloud-based software will allow subcontractors to improve communication between the field and the office to ensure real-time communication between all members invested in a project. This allows project managers and supervisors to keep track of the progress on the jobsite ensuring projects meet milestones and deadlines. Having alternatives without having to up-end resources for projects is the direct result of better communication project communication.

6. Managing Documents & Files

There are a massive number of documents and files that the subcontractor is responsible for and it is hard to keep them organized, especially if the subcontractor is using paper-based records and archaic processes. If a subcontractor uses a mobile and cloud-based system for his record keeping, he will be able to easily access all notes, documents, photos, and anything else he might need. Out in the field and the office. Employing easy to use

files, more importantly, quickly tracking the most up to date versions save him the trouble of any stoppage or rework, a continual hazard from traditional record keeping.

7. Integrating Technology

The construction industry is shifting, and the need for mobile and cloud-based technology is becoming a necessity to stay competitive. However, integrating these technologies can pose a challenge in itself. The technology should not change the operations of your company, but rather act as an aid for streamlining existing practices. The technology should be implemented slowly rather than all at once to resist opposition from veteran employees who may not believe in the use of technology.