

# Topic 4 Section 4

# Duties and Responsibilities

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## Introduction

This section considers the duties and responsibilities of the people who are involved in the administration of contract work. The overall purpose of doing so is to provide an understanding of the relationship between the principal and the contractor.

The people involved in a contract may have various titles (e.g. resident engineer, contractor's representative). The following text includes titles often found on construction sites.

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**Note!**

*Trainees should be aware that not all organisations use the same titles, even though the positions may be similar, and that titles may vary from site to site.*

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## Staff Roles

AS 2124 describes the roles of staff who have traditionally been appointed to large civil construction projects, such as superintendent, superintendent's representative, and contractor's representative. These roles, as generally understood and accepted within the construction industry, are described in the following table.

Participant	Alternative Designation	Role in Site Organisation
Principal	—	The person (usually the owner) who stipulates the type of work and the standard of workmanship required, and nominates the contract conditions.
Contractor	—	Offers to undertake work at an agreed price acceptable to the principal, in accordance with the conditions of contract.
Owner	—	The person who requires the works to be carried out on their behalf.
Superintendent	Engineer	The person nominated in the contract who, both parties agree, should impartially ensure that both the principal and contractor properly perform their respective obligations under the contract. (The term is used in Australian Standard 2124–1992 and is clearly defined in Clause 2, Interpretation).
Resident engineer	Superintendent's representative	The person to whom the superintendent has delegated some of the powers under the contract, and is responsible for the direct administration of the works being undertaken by the contractor.
Contractor's representative	Project manager	The person appointed by the contractor to manage the works and represent the company on site.
Contractor's quality representative	CQR	The person appointed by the contractor to administer the project's quality plan.

Participant	Alternative Designation	Role in Site Organisation
Inspector	Clerk of works	The person on the resident engineer's staff who is concerned chiefly with workmanship, including quality control.
Site engineer		The person who deals with all technical issues and undertakes duties as delegated by the resident engineer.

Once a contract is awarded, the principal appoints a superintendent (or engineer). The superintendent, who may also be an employee of the principal, may also appoint a superintendent's representative to whom he delegates certain powers.

The superintendent acts separately from the site organisation, and is not usually present on site for day-to-day activities.

Similarly, the contractor sets up a site organisation under a contractor's representative, who has specified duties and responsibilities, as delegated by the contractor.

Therefore, on the one site there are two independent organisations, but with related spheres of control.

## Superintendent

The superintendent, who is identified in Annexure A of the tender documents, is responsible for co-ordinating the administration of the contract. The superintendent may be a person or a company.

While administering the contract, the superintendent must act honestly and fairly on contractual matters and other issues between the principal and contractor, and must act in accordance with the terms and conditions in the contract documents.

## Limitations on the Role of the Superintendent

Clause 23 of AS 2124 clearly sets out the functions that the superintendent fulfils under the contract.

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### **Note!**

*The superintendent is not a party to the contract.*

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Ultimately, it is the principal who has made the promise. Therefore, it is the principal who may be subject to a claim for a breach of promise. The superintendent is not a party to any arbitration under Clause 47 of AS 2124, but may be involved in arbitration.

The first paragraph of Clause 23 of AS 2124 (see following) is quite explicit in requiring the principal to ensure that there is a superintendent at all times. If not, the contractor can take action under clause 44.7, Default of the Principal. Whether a breach of contract exists will usually depend upon the period of time for which there is no superintendent. The contractor can claim under clause 42.1 any costs incurred as a result of delay. For example, if the lack of

a superintendent prevents the issue of a certificate of practical completion, resulting in both financial and resource implications, there may be a substantial breach.

The Principal shall ensure that at all times there is a Superintendent and that in the exercise of the functions of the Superintendent under the Contract, the Superintendent -

- (a) acts honestly and fairly;
- (b) acts within the time prescribed under the Contract or where no time is prescribed, within a reasonable time; and
- (c) arrives at a reasonable measure or value of work, quantities or time.

The duties of the superintendent fall under two headings:

- those necessary for the proper administration of the contract, to ensure that both materials and workmanship conform to the contractual requirements, and
- certification duties required in accordance with the general conditions of contract.

## Roles in Administration and Certification

The superintendent's responsibilities, to ensure that both materials and workmanship conform to the contractual requirements, have a direct bearing on the duties of an inspector. Certification duties required in accordance with the general conditions of contract are the direct responsibility of the superintendent. However, their consequences may arise from an action by an inspector in the field.

The certification duties of the superintendent involve settlement of specific issues between the two parties, such as valuations, in which an honest and fair mediator is required.

## Further Effects of Clause 23

Paragraphs 2–5 of Clause 23 in AS 2124, as quoted below, influence the duties of the inspector as well as those of the superintendent.

(2) If, pursuant to a provision of the Contract enabling the Superintendent to give directions, the Superintendent gives a direction, the Contractor shall comply with the direction.

(3) In Clause 23 ‘direction’ includes agreement, approval, authorization, certificate, decision, demand, determination, explanation, instruction, notice, order, permission, rejection, request or requirement.

(4) Except where the Contract otherwise provides, a direction may be given orally but the Superintendent shall as soon as practicable confirm it in writing.

(5) If the Contractor in writing requests the Superintendent to confirm an oral direction, the Contractor shall not be bound to comply with the direction until the Superintendent confirms it in writing.

### *Paragraphs 2–3*

The fact that the superintendent directs the contractor to do something, or approves of the contractor not doing something, does not necessarily:

- bind the principal or
- entitle the contractor to recoup from the principal any extra costs involved.

The direction or approval does bind the principal if the:

- the principal authorised the superintendent to give the order or approval
- effect of the common law is to deem that the principal has given the authority to the superintendent. (For example, if it was included in the superintendent’s delegations.)

The contractor is entitled to extra costs if the:

- contract documents expressly provide that the contractor is entitled to extra costs (i.e. provisional quantities in a schedule of rates).
- common law deems there is an obligation to pay the contractor.

In both cases, there may also be an entitlement to a claim under common law.

### *Paragraph 4*

The superintendent may give directions orally, except where the contract provides otherwise. The directions must be confirmed in writing, otherwise the contractor may:

- ignore the notice, or
- waive the requirement that the notice be in writing and comply with the oral direction.

If the contractor decides to comply with the oral direction, this action could create problems at a future date, especially if an issue arises in relation to a variation.

If the superintendent has not been given the power to issue oral directions, all instructions will need to be in writing, or he or she may be breaching the contract. This is why on most jobs an inspector is given an instruction book. In some circumstances, an inspector may have been given authority to issue instructions; however, the superintendent can still countermand or change them.

### *Paragraph 5*

This paragraph supports previous paragraphs (3 and 4) in that the contractor does not need to comply with an oral direction until it has been confirmed in writing. This is a legal requirement, because of the need to accept an offer in the same mode in which it was made, which in the case of a civil engineering contract is normally in writing.

## Resident Engineer/Superintendent's Representative

Clause 24 of AS 2124 describes the conditions affecting the appointment of and authority of a superintendent's representative.

The resident engineer is the superintendent's representative on the job site and is usually a person with experience as an engineer. Inspectors are responsible to this person either directly, or through the organisational structure.

The superintendent normally delegates significant authority and responsibility to the resident engineer. This is to ensure that the work is undertaken within the terms of the contract documents. These delegations ensure that the superintendent can remain impartial and can make unbiased decisions. The superintendent is required to do this under the terms and conditions of the contract, in that the superintendent must act honestly and fairly on all contract matters relating to the project.

Field and office staff, such as engineers, surveyors, inspectors, and clerks, assist the resident engineer, where necessary. A broad outline of the duties of the resident engineer would include:

- Organising and scheduling duties of staff, as requested by the contractor or in accordance with the contractor's construction program.
- Executing or supervising tests carried out on site, and organising inspection of materials and equipment manufactured off site.
- Keeping a daily diary, to provide a detailed history of the work and to record all other relevant events on site.
- Inspecting and accepting permanent work, while ensuring that it is being constructed to the correct line and level, and that materials and workmanship comply with the contract documents.
- Calculating and measuring quantities of the work completed including any day work, and negotiating agreement on quantities with the contractor's staff. (This would also include calculating and measuring quantities for progress payments and final payment to the contractor).
- Maintaining a progress record, so that progress of the contract can be monitored against the approved construction program.
- Determining the cost of variations and the validity of claims made by the contractor.
- Examining the methods used by the contractor, including those for temporary works, to ensure that they conform to the Workplace Health and Safety Act and good engineering practices.
- Redesign of works to the extent delegated, or required to meet the needs of the contract.
- Maintaining 'as constructed' drawings.
- Implementing termination procedures, preparing project reports, and preparing documents for certification by the superintendent.
- Effective and efficient operation of the site organisation, ensuring that it is operating economically whilst maintaining high standards of acceptance.
- Co-ordination of contractors and service authorities, so that each may proceed unhindered and complete their part of the contract within the required time.
- Organising regular site meetings with the contractor.

The contractor is responsible for performing the work, and for the safety of all personnel and property. The resident engineer is responsible for seeing that the contractor's actions are in accordance with the contract, local regulations, sound practices, and good engineering.

An individual person may be appointed as resident engineer, but not a corporation.

Clause 24 of AS 2124 allows the appointment of a number of superintendent's representatives on a job site. Different individuals may be responsible for various aspects of the work, including:

- a particular type of work, such as electrical, civil, or mechanical
- a site or place of work, such as foundations, structures, or earthworks
- tests, such as materials, geo-mechanical, or mechanical.

The superintendent may also employ agents (or adjudicators) under this clause. For example, a lawyer may be employed to assist in interpreting the conditions of contract, or to advise on disputes.

The clause states clearly that only one person may be employed on one particular function. There are flow-on effects if more than one person is delegated the same responsibilities at the same time. For example—

- The second delegation may be void.
- The second delegation may revoke the first delegation, or both delegations may be void.
- Both delegations may be valid, but there is a breach of Clause 24.

If any of these situations arise, the contractor will argue for or accept the one that is most expedient, because it is a breach brought about by the superintendent that has created the problem.

As stated in Clause 24, the appointment of a resident engineer does not prevent the superintendent from continuing to exercise any function he has delegated. However, it is normal practice for the contractor to make submissions to the superintendent through the resident engineer.

When a resident engineer is appointed, the superintendent is contractually bound to advise the contractor. A standard form of notice is shown below.

“(To the contractor)

I have appointed Mr. Brown, as superintendent's representative, to exercise the following functions: - all the functions of the superintendent under the Contract except the function of deciding disputes pursuant to Clause 46.1 of the General Conditions of Contract.

This notice is given under Clause 24 of the General Conditions of Contract.

Signed

Superintendent

(Date)”



The contractor can make a reasonable objection to the appointment and, if it is upheld, the appointment is terminated. However, the contractor must have a good reason. If not, the superintendent can continue the appointment.

AS 2124 specifically states that there should only be one individual appointed to a function. The contractor is to be advised of the extent of the powers, duties, discretions and authorities exercisable by that person.

## Inspectors

### Duties of the Superintendent's Site Staff

Duties and responsibilities of the inspector and other members of the resident engineer's staff are normally established prior to the commencement of the contract, and are relayed to the contractor. For example, there may be a pre-start conference between the contractor and the superintendent or resident engineer.

The prime responsibility of the resident staff, who have been engaged for the supervision and administration of a construction contract, is to see that the principal receives the finished product stipulated in the contract.

However, the inspector and other members of the resident engineer's staff have an important, second responsibility—to ensure that the prices of future contracts are not inflated because of the harsh application of administrative procedures.

The prime duties of the superintendent's site staff are therefore observing, checking and accepting the works.

### Duties of an Inspector as Part of the Superintendent's Site Staff

The main duties and responsibilities of an inspector are to inspect work being undertaken by the contractor to ensure it conforms to the requirements of the contract documents.

The inspector is part of the site organisation and normally has three tasks to perform over the lifespan of the project:

- Appraising the contractor's ability to carry out the works to the satisfaction of the superintendent and in accordance with the specifications, drawings and relevant sections of the contract documents.
- Continuous surveillance of the contractor's operations, to ensure the achievement of minimum standards and the use of appropriate methods of construction and engineering practices.
- Testing and inspecting the finished works for final acceptance.

In dealing with the quality of materials and workmanship, inspectors not only need to have a knowledge of the requirements of the contract documents (especially the drawings and

specifications), but also to understand the reasons for these requirements. The contractor could be involved in unnecessary expense if an inspector insists on rigidly applying compliance requirements (which may not be applicable to the particular aspect of work), or alternatively, if a critical requirement is relaxed to the detriment to the works.

## Grouping of Inspection Staff

The inspection staff on a project can be classified into four groups:

- engineers (resident or specialist)
- inspectors (field supervisors)
- surveyors
- materials technicians and soil testers

## Clauses Affecting the Role of an Inspector

Clause 22 (Clerk of Works and Inspectors) in AS 2124 simply requires the superintendent to notify the contractor, in writing, of the name of an inspector appointed to the project.

Other, relevant clauses that directly apply to the position are:

- Clause 27.2, dealing with access for the inspector.
- Clause 31.1, dealing with assistance to carry out tests. It also defines 'test' to include examine and measure.
- Clause 31.3, enabling the superintendent to direct who is doing or shall do the test.

The only time an inspector can issue an instruction to the contractor is if the inspector is nominated as a superintendent's representative. If an inspector gives a direction to the contractor without being nominated as a superintendent's representative, contractual problems can arise. In they do, the contractor can choose to:

- ignore the instruction
- ask the resident engineer or superintendent to put it in writing.

## Inspector's Attitude to the Job

An inspector must have the right attitude to the job, because time is an important element in any contract. The contractor has to complete the work in a specified time. This can only happen if there is full co-operation between the two organisations.

The following are examples of methods an inspector can use to promote completion of the works:

- timely reminders
- recognition of contractor's rights
- friendly co-operation
- exercising restraint when giving advice.

### *Timely Reminders*

For example, on a road construction job, samples of paving materials are usually submitted for approval prior to the start of paving operations. The test (required under the terms of the contract) takes time to perform. Therefore if the contractor has not submitted samples, an inspector should remind the contractor about the samples well before paving operations are scheduled.

### *Recognition of Contractor's Rights*

If the contractor makes a profit from completing a job on time, it cannot be said that he or she has done anything immoral or underhand.

On rare occasions, there have been inspectors who have considered it their duty to do everything possible to minimise the contractor's profit. The administration of a contract where such attitudes exist is invariably difficult. Relationships between people in the two organisations are charged with personal tensions, and disputation is an almost-certain outcome.

### *Friendly Co-Operation*

The basic attitudes of the resident engineer's staff can determine the standard of personal relationships that will exist on the project. The inspector's attitude must be one of friendly co-operation with the contractor, and of impartiality in the application of the contract documents.

### *Exercising Restraint When Giving Advice*

Because of previous experience, an inspector may (in many cases) be aware of more efficient methods and techniques than those the contractor is using on the job. If the contractor asks the inspector for an opinion, he or she should be willing to share the relevant knowledge with the contractor's representative. However, the contractor makes the final choice. An inspector should not, on any occasion, impose a method on the contractor unless, of course, it is specified in the contract documents.

## **Teamwork**

A contract job requires a co-operative team effort between the two parties, and willingness to negotiate. The team objective should be to get the job done to everybody's satisfaction.

The inspector fits into the team as the "go between" or link between the resident engineer and the contractor's representative. The resident engineer will invariably delegate some authority, and inspectors must work within the limits imposed and use their authority wisely.

Inspectors must adopt a positive attitude in their dealings with all concerned, and make every effort to get the job done satisfactorily.

# Checklist of Inspection Duties

In a construction contract, a number of people have duties that involve inspecting and checking the work carried out by contractors or subcontractors. The people to whom these duties apply vary according to the nature of the contract, but may include:

- A contractor's quality representative, where the contractor is employing a number of subcontractors to complete work for a private owner (e.g. in residential subdivision works)
- A contractor's representative, where a person has been appointed by the contractor to manage the works and represent the company on site (e.g. on a state government job)
- An inspector on the resident engineer's staff, where the works require the contractor to meet documented quality specifications (e.g. a road construction job).

The duties of such personnel change according to their position (i.e. whether they represent the owner or the contractor) and with the nature of the contract. However, the following are general suggestions for improving inspection outcomes.

1. Familiarity with the plans and specifications, as they apply to the work being inspected, is recommended. Knowledge of the plans and specifications is reinforced by frequent review. The aim is to develop the capability of immediately recognising work that conforms, or does not conform, to the contract requirements.
2. If any material or portion of the work does not conform to the requirements, the contractor should be advised of this as soon as possible. This means explaining why it does not conform, and making a record in the daily diary or log. If the contractor ignores the matters discussed and continues the operation, it may be necessary to issue a written notice, and advise the next most senior person in the site organisation of the continued non-compliance.
3. All actions should be aimed at promoting the progress of the work. Inspecting personnel will be best equipped to achieve the best outcomes on site if they are familiar with the construction schedule and know how the work fits into the overall schedule. Completion of the work within the contract time is of importance to both the owner and the contractor.
4. No-one on site should carry out work that properly belongs to the other party's area of responsibility. For example, an inspector on the staff of a Main Roads resident engineer must carefully avoid any inspection, testing, or other activity that is the responsibility of the contractor; otherwise, the owner's position may be prejudiced in the event of a dispute or claim. Responsibilities for quality control are specified in the contract.
5. Some work may become hidden as the project progresses, such as driving piles, laying pipe in a trench and placing concrete. If inspecting personnel need to take leave from the site, they should ensure that someone is delegated to conduct inspections of work before it is hidden.

6. Maintaining a daily record of events on site is important. Diary entries should include the contractor's or subcontractor's activity on the work being inspected, any instructions given, and any agreements made. In the event of contract disputes, the daily reports and diary or log book may assume legal importance.
7. On-site tests should be conducted carefully and without delay. Test samples must be carefully handled and protected, and any test failures must be reported without delay. It is a needless waste of time and money if the relevant person is informed of an unsatisfactory result of a test that was performed two or three days previously.
8. Inspecting personnel should:
  - a. Check materials as soon as possible after delivery to site. The situation should never arise where materials are rejected after they have been placed in their permanent position. This is not in the best interests of either party to the contract.
  - b. Promptly check preparatory work— such as clean-up inside the forms, fine grading of footing areas, and winter protection of concrete— to minimise delay to subsequent operations.
  - c. Inspect work as it progresses. For example, if inspections of reinforcing steel and other embedded items are postponed until they are 100% complete, progress is delayed.
  - d. Be available at all times to provide prompt inspection, and to make decisions on acceptance when required. For example, it is generally not well received when works are delayed while a quality representative is attempting to locate the contractor somewhere on site. However, all parties should give adequate, prior notice of the need for an inspection.
9. If the specific tolerance applicable to a particular class of work is found to be unrealistic, the matter must be reported to the applicable representative.
10. Inspecting personnel who are over-zealous in interpreting a specification are not greeted with enthusiasm, especially if it is not applicable to the particular situation. In such cases, it is better for people to take a step back and ask themselves why the particular specification needs their detailed attention. The best approach is to seek advice before making unwelcome statements.
11. Whenever possible, problems should be anticipated before they occur. For example, a contractor's representative or foreman may seem to be unaware of a block out or other embedded item that must be set in with the concrete formwork. On a state government contract, a Main Roads inspector would point this out to the contractor. By doing so, he or she contributes to maintaining the progress of the work. However, it is not reasonable for one party to the contract to rely on the other to foresee problems. If this starts to happen, people should think carefully about who their employer is, and refuse to be drawn into the situation.
12. Inspecting personnel should be capable of recognising unacceptable work in its early stages and should ensure that they lodge the relevant report on the matter without delay. If people are committed to acting early in the event of problems, necessary reconstruction can be carried out before it becomes expensive and time-consuming to fix the problem. All actions concerned with unacceptable work must be confirmed in writing. For example, if

a subcontractor's personnel are using the wrong form lining for concrete work, stockpiling unacceptable backfill material, or placing undersize rip-rap material, the contractor's quality representative should inform the subcontractor of this at first opportunity. An experienced person who is thoroughly familiar with the contract requirements can recognise these situations almost immediately.

13. Any unresolved problem that has the potential to develop into a critical situation should be reported immediately. If people fail to take action, the end result will be the lodgement of a claim at a later date.
14. Inspecting personnel should thoroughly investigate situations and their possible consequences, before making a hasty decision. Many embarrassing situations develop from decisions made prematurely. It is better to seek advice from the resident engineer or contractor, if necessary.
15. When one party is required to correct work, there should be a prompt follow-up inspection. Otherwise, corrections may be forgotten or the work may be covered over.
16. People must stand behind decisions once they have been made. Backing away from a decision when the heat is on can cause immeasurable damage to on-site relationships.
17. Some items are essential and some are not. Knowing the difference is a critical skill. Best results are obtained when people realise that sometimes it is better to back off and let a minor fault occur than to make an issue.
18. Safety comes first on all construction sites. Anyone who sees a dangerous situation on the job has a responsibility to draw it to the attention of the person responsible for safety, and then to note it in the daily diary or log book.
19. Alertness and powers of observation are essential. Any situation that could cause the project to be delayed should be reported immediately.

## Roles of Contractor's Staff

In this section, the discussion so far has mainly been about the staff employed by the principal and superintendent.

Many civil contractors are involved in a variety of types of contracts, individually drawn up to meet the needs of the parties and the specific conditions under which construction work will take place. While large contracts and state government tenders are an important source of work in the civil construction industry, the formalised staff positions and roles shown in the table (see page 2) are not always directly applicable to current contracts.

Instead, contractors tend to appoint people from a variety of disciplines, as described below, to work on a contract. As shown, the contractor's expectations are different for each.

## Typical Contract Personnel

### *Senior Project Manager*

A senior project manager is a person capable of running a single, large project up to \$10 million, or a number of smaller projects. He or she generally will have strengths in one or two areas, but would be capable of tackling almost any project. The appointee must have good engineering and construction skills, and excellent personal productivity. He or she needs to be commercially and contractually savvy, and capable of resolving all but the most intractable disputes. A competent senior project manager will command the respect and loyalty of associates and subordinates. The manager exercises minimal supervision, mainly through monthly management reports.

### *Project Manager*

A project manager is capable of running a single project up to \$4 million or a maximum of three small projects less than \$750 000 each. Skills may need matching to the projects. Such a person will be very capable in areas where of previous experience, but may need some guidance in contractual and commercial matters. A person appointed as a project manager should be capable of resolving variations, but may need help with contractual claims, and may need some supervision in programming and planning. A project manager is in apposition where he or she does not command immediate respect, but has to earn it. A contractor would expect to exercise some supervision at site meetings and in any 'positioning' strategies.

### *Site Engineer or Manager*

A site engineer or manager is capable of running a single project up to \$1.25 million. This person will have some commercial and contractual savvy, but still makes significant errors and needs coaching to develop skills. However, he or she should be quite capable of pricing simple variations and procurement. A contractor would expect a site engineer or manager to handle day-to-day contact with the superintendent, but need support at a site meeting.

### *Junior Engineer*

A junior engineer is an engineer with less than three years' post-graduate experience. Typically, such a person will still be 'learning the ropes', and is therefore given limited responsibility; usually works under fairly close supervision.

### *Supervisor*

A construction supervisor generally plays a roving role and focuses on production, and some management or deployment of production resources. He or she must be technically competent, but is usually lacking in engineering knowledge. The appointee must be a practically oriented person with extensive experience.

### *General Foreman*

A general foreman must be capable of controlling a wide range of work, including earthworks, pavement, concrete structures and underground services. His or her role is to read the specification, do the paperwork, and simultaneously maintain a number of separate work faces. This person must be able to manage men on the job and his or her own time. In addition, the appointee must understand the dollars involved in each type of work and exercise control over costs.

### *Foreman*

A foreman must be capable of most types of work normally carried out on a civil construction site, but may be less familiar with particular areas, such as concrete structures. The normal expectation is that a foreman will require some assistance with the specifications, and may need prompting for his paperwork. However, he must be able to maintain one or two work faces and manage men on the job (but may surprise the contractor from time to time with some inadequacy). The foreman needs a basic understanding of costs.

### *Sub-Foreman*

A sub-foreman (also known as leading hand) is a person who is very capable in some areas of construction work. Typically, he will need some explanation before understanding a specification and is not used to paperwork or cost control. The normal operational area of the sub-foreman is one workface; he can manage a small team of competent people.

### *Contract Administrator*

A contract administrator is responsible for administration functions such as timesheets, procurement, QA, progress claims, price variations, client reports etc. This person is generally does not have a construction qualification, but has experience in administration and is oriented towards office work.

### *Senior Estimator*

A senior estimator must be capable of all work required to prepare an estimate to tender review stage, for a wide variety of project types and sizes up to \$15 million; and must be able to do this without supervision. A good estimator can price work from both thumbnail sketches and detailed drawings, and his or her work can be relied upon for accuracy and thoroughness. It is the estimator's role to flag any unusual contract requirements, project risks or tender submission requirements. He or she will have some skill in finding alternative methods or materials.



## Estimator

An estimator is a person who is capable of detailed measurement from adequate documentation. He or she must be able to seek and obtain subcontract or supplier prices, and to price a range of standard activities (with some gaps). An estimator must have some ability in determining and pricing appropriate project overheads. However, as compared to a senior estimator, an estimator would normally have a more limited ability to assess unusual contract requirements, project risks or tender submission requirements.

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### **Note!**

*Regardless of role or position within a construction organisation, all personnel must put safety first. Anyone who sees a dangerous situation on the job has a responsibility to draw it to the attention of the person responsible for safety, and then to note it in the daily diary or log book.*

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## Letters of Appointment

The following pages gives examples of letters of appointment (and position descriptions) that a contractor might use for staff employed on a construction site. The examples show the types of duties that are applicable to construction work and the general scope of remuneration.

## SAMPLE LETTER OF APPOINTMENT

*(Date)*

*(Name)*

*(Address)*

Dear Sir or Madam,

We have pleasure in confirming your appointment as (title of position) to this company and set out hereunder the terms and conditions of this appointment.

### DUTIES

**Foremen** are responsible to ensure that work is carried out to a satisfactory level of technical competence, that it is built in accordance with the specified requirements, that the work is done efficiently and in accordance with both legislated requirements and the company's procedural requirements. They are required to carry out some short-term planning to ensure that, on the day, there are sufficient resources to complete the required tasks.

**Project Engineers** are based on site as skilled and intelligent assistants to both the project manager and the foreman. They will be required to use their abilities to carry out specified tasks, such as ordering delivery of plant and materials, keeping of records, making claims (for both time and money), and more general contract and subcontract administration.

**Project Managers** are based on site and are responsible for overall project performance in terms of cost, quality and time. This includes long-term planning, a detailed knowledge of the requirements of the contract, and sound knowledge of the legislated and industrial requirements of the environment they are operating within. They are required to have an understanding of cost, budget and profit implications of the decisions they take, and to exercise ingenuity, enterprise and intelligence to maximise profit potential. A project manager must understand the company's ethics and culture, and report any salient information to the construction manager.

**Civil Estimator.** Our company, XYZ Co. Pty Ltd, is a general civil-engineering contractor and we construct a wide range of project types. The civil estimator carries out all functions necessary to produce a complete tender submission, ready for management review, from a client's tender documents. The company uses a computerised estimating system and the estimator is expected to have sufficient computer skills to input information, and use the system effectively and efficiently. Key requirements for the position are accuracy, speed and a working knowledge of the civil engineering industry, particularly in the areas of contracts, suppliers, subcontractors and production rates. Our office is close-knit and it is important to us that we maintain a satisfactory office dynamic.

**Surveyors** are responsible for the care and attention of all company-owned surveying equipment and the testing and updating of all such equipment on a regular basis, in accordance with quality assurance procedures. Surveyors carry out survey set-out work on various company projects, as required. In addition, they are required to co-ordinate the servicing, care and attention of all company-owned vehicles.

The **General Manager's** role is to manage the financial and technical aspects of the company for profitability and growth. He or she must achieve agreed financial goals, within the policy laid down by the managing director, and ensure compliance with legislative requirements for the operational section of the company. The general manager collates and presents a concise monthly financial statement, which shall include a running profit and loss statement, current cash position and balance sheet. The general manager is responsible to the managing director for the profitable management of the company.

#### REPORTING

All appointees are responsible to their construction or project manager for the execution of the specified duties.

#### INFORMATION

All appointees will have access to information necessary for the effective fulfilment of their obligations and the proper discharge of their responsibilities.

#### REMUNERATION PACKAGE

The main provisions of the remuneration package are:

**Base Salary:** \$xx,000 per annum, paid directly into your bank in (number) equal instalments. Payment will be made on the (applicable day or date) of the (week/month).

**Telephone:** The company will pay all reasonable phone charges for business usage. Alternatively, the company may provide a mobile phone and pay all reasonable charges for its use.

In addition to the main provisions shown above, the company may include any of the following additional provisions, as appropriate to the position, in the remuneration package.

**Vehicle:** The company will pay you \$x per week for the use of your vehicle, plus a fuel card for the duration of the probationary period. At the expiry of the probationary period, if the position is made permanent, consideration will be given to providing a fully maintained company vehicle in lieu of the car allowance. Alternatively, the company may supply a fully funded (type of vehicle). In this case, fuel, oil, servicing and normal consumables will be to the company's account. Any fringe benefit tax associated with the vehicle for private purposes will be to the company's account. You are required to keep a log book for a period of twelve weeks. This will constitute full reimbursement of any business usage. It will be your responsibility to satisfy any requirements of the ATO in respect of this allowance.

**Superannuation:** The company will pay superannuation at the legally required rate into its account with (name of superannuation fund).

**Accommodation:** The company will not be liable for any accommodation charges unless it requires you to work at locations which you cannot satisfactorily access on a daily basis.

**Bonus Arrangements:** The company may make bonus payments to staff as a reward for outstanding effort and to provide a share in the rewards of those efforts. These payments may be made from time to time at the company's absolute discretion.

**Salary Review:** Your salary will be reviewed at the end of the probationary period. If the position is made permanent, and from then on, your salary will be paid on an annual basis in June of each year, commencing in June (year).

**Future Training.** The company wishes to put in place a training regime to reinforce and upgrade employees' skills, as necessary to maintaining and improving the company's efficiency. The company will give favourable consideration to training proposals which show a potential benefit to the company.

**Leave Provisions.** Annual leave will be four weeks per annum, to be taken by mutual arrangement. Your entitlement to sick leave will accrue at the rate of two weeks per annum. Long service leave will accrue at the rate of one week per year of service, which may be redeemed or taken in accordance with the then-current legislation.

**Behaviour and Appearance on the Job.** The company depends on its reputation and you are expected to behave courteously and ethically when representing the company. The company wishes to project a professional image and you are required to be clean and neat, consistent with your position and duties, in your appearance.

**Timetable for Appointment.** Your appointment will be effective on and from (date), unless a different date is agreed.

**Probationary Period.** A probationary period of (number) months will apply to this appointment after which time, subject to agreement of the general manager and yourself, the appointment will be considered permanent.

**Resignation or Termination.** Employment can be terminated by the giving of one month's notice in writing by the employer or the employee. Payment may be made in lieu of notice by the employer. The employee shall forfeit monies in lieu of notice where such notice is not given to the employer.

We would like to take this opportunity of welcoming you to the company and we look forward to a mutually successful future.

Yours sincerely,

*(signature)*

for XYZ Construction Company Pty Ltd.

I have read understood and am fully in agreement with the contents of this Letter of Appointment including the terms and conditions contained therein.

*(signature)* .....

Witness.....

Date.....

## SAMPLE POSITION DESCRIPTION (1)

**Position title:** Project Engineer

**Accountable to:** Project Manager

### **Position Objectives:**

- To provide engineering and technical support to the project manager to assist in the successful management of the project to deliver agreed project and branch objectives.
- Establishment and maintenance of positive client and community relationships.

### **Responsibilities:**

#### *Project Planning*

- Assist the project manager in the establishment of project objectives.
- Assist in the preparation and implementation of project management plans reflecting these strategies and establishing the basis for the overall project management system.
- Maintain a preventive and contingent approach to project planning at all times.
- Plan, maintain and monitor the work program encompassing all procurement, operation and completion activities involved in the project.
- Prepare work packages and documentation for tender by potential subcontractors and to ensure that tender information includes details of quality requirements.
- Provide engineering and technical input to construction operations management and supervisory staff to allow productive and cost effective completion of the works.

#### *Team Management & Development*

- Establish and organise the project team in conjunction with the project manager.
- Ensure all project issues are understood and accepted by all parties and at all levels, including third parties.
- Recognise, encourage and participate in the training and development of project personnel.

*Procurement*

- Review and approve procurement commitments within the approved project budget.
- Ensure procurement scopes of work are clearly and comprehensively defined.
- Evaluate and ensure major suppliers/subcontractors/consultants are capable of meeting project requirements in all respects.

*Project Delivery/Performance*

- Plan, lead, organise and control all project resources to deliver the project management system requirements and project objectives on an ongoing basis.
- Pro-actively plan and participate in audit and review programs to ensure system compliance and effectiveness.
- Act to correct areas of project under performance or non-compliance.
- Co-ordinate, control and have an active part to play in the engineering and technical activities of the project.
- Continually evaluate, review and determine the most appropriate use of construction methodologies for best project performance.
- Ensure a professional approach to administration of the contract is maintained.
- Regularly report to the project manager on the technical, systems and productivity performance of the project.

*Health Safety and Environment*

- Pro-actively manage the effectiveness of health safety and environmental measures on site.
- Carry out specific HS responsibilities as defined in the project management systems.
- Act in emergency situations.
- Ensure that all legislative and contractual constraints with regard to health, safety and environmental issues are taken into account during the planning process.

*Client/Community/Other Relationships*

- Manage client, community and supplier/subcontractor/consultant relationships to achieve long-term loyalty. Develop the culture of repeat business in all project staff.
- Pro-actively market the company and project to clients and the market place.
- Maintain industrial harmony. Resolve issues promptly in conjunction with appropriate personnel.

*Reporting and Records*

- Ensure periodic reports are accurate and submitted on time.
- Assist in the preparation of monthly valuation reports.
- Liaise with the project or construction manager regarding, and report on, client and other issues.
- Ensure comprehensive project records are established and maintained.

*General*

- Carry out specific responsibilities as defined in the project management systems.
- Plan for and facilitate the effective utilisation of project, branch and divisional resources.
- Perform other duties as may be defined by the project manager.
- Comply with company policies and the code of ethics.

## Authority:

The Project Engineer is delegated with the authority to plan, lead, procure and commit resources for the proper performance of the project, in accordance with company and regulatory requirements, subject to the following:

- Engagement and dismissal of staff members must be referred to the project manager.
- Commitments beyond the approved project budget must be referred to the project manager.

In the absence of the project engineer, the project manager or nominee will assume the responsibilities and authority of the project engineer.

Incumbent: \_\_\_\_\_ Date: \_\_\_\_\_  
(Name & Signature)

Approved by \_\_\_\_\_ Date: \_\_\_\_\_  
(Manager): (Name & Signature)

## SAMPLE POSITION DESCRIPTION (2)

**Position title:** Foreman

**Accountable to:** Project Manager

### **Objectives:**

- Successful management of work operations and management systems to deliver agreed project and branch objectives.
- Implementation of production systems to ensure reliable and productive operation.
- Establishment and maintenance of positive client and community relationships.

### **Responsibilities:**

#### *Project Planning*

- Plan, lead, organise and control the operations personnel and construction equipment on site.

#### *Team Management & Development*

- Implement the project plans as they apply to operations, including procedures relating to quality, health and safety and environmental plans.
- Direct and control labour, subcontractors, plant and materials as directed by the project manager.
- Establish and maintain clear lines of communication with project support staff and client representatives.
- Liaise with the project manager to ensure timely and productive team management and development.
- Assist the project manager with the selection and utilisation of operations personnel.

#### *Procurement*

- Procurement of resources with authorisation by project manager.

#### *Project Delivery/Performance*

- Ensure labour and subcontractors comply with their approved work method statements.
- Co-ordinate and direct personnel and subcontractors.



*Health Safety and Environment*

- Carry out specific HS&E responsibilities as defined in the project management systems.
- Act in emergency situations.
- Ensure compliance with all relevant health, safety and environmental legislation and standards.

*Client/Community/Other Relationships*

- Manage client, community and supplier/subcontractor/consultant relationships to achieve long-term loyalty. Develop the culture of repeat business in all personnel.
- Maintain industrial harmony. Resolve issues promptly, in conjunction with appropriate personnel.

*Reporting and Records*

- Ensure periodic reports are accurate and submitted on time.
- Ensure information supplied regarding production is accurate and timely.
- Assist the site engineer with the compilation and maintenance of the production database.

*General*

- Carry out specific responsibilities as defined in the project management systems.
- Plan for and facilitate the effective utilisation of project, branch and divisional resources.
- Perform other duties as may be defined by the project manager.
- Comply with company policies and the code of ethics.

**Authority:**

The foreman is delegated with the authority to plan, lead, procure and commit resources for the proper performance of the project in accordance with company and regulatory requirements, subject to the following:

- Engagement and dismissal of staff members must be referred to the project manager.
- Commitments beyond the approved project budget must be referred to the project manager.

In the absence of the foreman, the project manager or nominee will assume the responsibilities and authority of the foreman.

**Advice and Service:**

Advice and service is directly available from the personnel listed below. Any conflict resulting from advice received should be brought to the attention of, and clarified by, the project manager.

- Administration
- Human resources
- General foreman
- Project manager.

Incumbent: \_\_\_\_\_ Date: \_\_\_\_\_  
*(Name & Signature)*

Approved by  
(Manager): \_\_\_\_\_ Date: \_\_\_\_\_  
*(Name & Signature)*

## SAMPLE POSITION DESCRIPTION (3)

**Position title:** Receptionist/Site Clerk

**Accountable to:** Site/Project Manager

### Objectives:

- To provide reception and administration services between the hours of 7.30am to 4.30pm Monday to Friday at .....site office.
- To coordinate all site communications and to present a professional image to our clients
- Provide efficient, timely and accurate execution of reception and administrative duties
- Generally provide service and assistance to staff wherever and whenever possible
- Become proficient in the operation of the following:
  - NEC PABX switchboard
  - Microsoft Office
  - Microsoft Access
  - Microsoft Excel
  - E-mail— Windows messaging

### Responsibilities

- Promptly answer incoming calls; take and deliver messages and inquiries to relevant site staff; develop a knowledge of site staff and personnel.
- Develop and establish good public relations, both internally and externally, by attending to reception duties in a professional, cheerful and friendly manner.
- Welcome site visitors; operate visitors pass and on-site register system; conduct short-form visitor inductions.
- Operate computer system by developing a sound working knowledge of word-processing packages and data-entry requirements. Change daily backup tapes and forward monthly tapes to head office.
- Word processing and data entry to ensure all correspondence, reports and notices are laid out in accordance with standards and quality assurance requirements.
- Mail collection and distribution; document control utilising in house and site filing systems; maintenance of site files.

- Assist the site or project manager with day-to-day administrative duties covering personnel, wages, plant and production records, subcontractor and creditors account processing.
- Prioritise duties to ensure timely and accurate completion of work.
- Maintain confidentiality in all matters relating to the company's operations.
- Assist other staff as required and work effectively in a team environment.
- Operate all office equipment and maintain it in good working order. Ensure adequate stocks of consumables are held, and regular servicing is completed.
- Comply with all statutory and environmental obligations, and be aware of branch objectives and targets. Adhere to all occupational health and safety requirements and procedures.

#### Authority

- You have no authority to act on the behalf of the company other than in the discharge of your duties

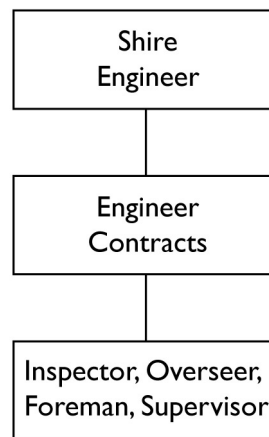
Incumbent: \_\_\_\_\_ Date: \_\_\_\_\_  
(Name & Signature)

Approved by \_\_\_\_\_ Date: \_\_\_\_\_  
(Manager): (Name & Signature)

## Organisation of Small Contracts

Previous discussion has centered on organisations that have been set up to undertake larger contracts (i.e. those ranging from \$500 000 upwards). However, local governments (i.e. city and shire councils) and other authorities regularly call tenders for work in the \$50 000 to \$500 000 range.

Contracts for public works of this nature are often made up of one or more independent (but related) jobs. The administration of this type of contract involves an organisational structure similar to that shown below.



Some of the differences in organisation of this type of work, as compared to larger projects, are described in the following list.

- The superintendent may be a contracts engineer of the shire or city council or, in some cases with small authorities, the shire engineer himself.
- The superintendent's representative may be either a works engineer or senior overseer, according to the size of the authority.
- Each of these officers will be allocated a number of contracts and will have field supervisors (inspectors) to support them.
- Each field supervisor will normally handle two to four contracts at any one time, according to the size and complexity of the contracts.
- These teams will normally operate out of a central office, rather than from a site office.
- The field supervisor makes regular, daily visits to each of the contract sites. The contracts engineer would normally make visit each job at least once or twice a week, unless there were problems requiring more frequent visits.

As with larger contracts, effective records must be kept and there must be a program to ensure that the work is being undertaken to the required standards.

Standards of inspection should not be lowered because of smaller job sizes. They should be maintained to the same level as those on larger jobs, so that the requirements of the contract documents are fulfilled.

## Section 4 – Assessment Activities

For information on how these assessment activities may be used as part of the learning process, see the section on ‘Assessment’ in the ‘Topic Descriptor’ section at the front of this topic.

### Theory Questions

The following questions allow you to assess your progress in understanding the material presented in Section 4. The questions may be of any of the following types:

- multiple choice (identify correct answer or answers)
- multiple choice (identify incorrect answer or answers)
- fill in the gaps in a sentence or statement
- identify a sentence or statement as TRUE or FALSE
- write a few sentences or a short paragraph.

Answers to the question are shown in the separate ‘Answer’ section.

#### Question 1

The superintendent is responsible for co-ordinating the administration of the contract. Which of the following statements are true and which are false?

The superintendent acts separately from the site organisation and is not usually present on site for day-to-day activities.

The superintendent must be a person – not a company.

The superintendent can only issue written directions.

If the superintendent directs the contractor to do something then the principal is bound by this direction.

#### Question 2

The person who is the contractor’s representative and is responsible for the contractor’s site organisation is known as the:

Superintendent

Inspector

Project manager

**Question 3**

In performing their assigned duty, inspectors should be given authority in proportion to the situation. Identify which of the following statements are true and which are false:

The inspector should have the authority to approve materials and workmanship that meet the contract requirements.

The inspector should be given the authority to order the contractor to stop work.

The inspector should have the authority to approve deviations from the requirements stated in the contract.

The inspector should not under any circumstances attempt to direct the contractor's work.

**Question 4**

Name the two duties of a contract superintendent.

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**Question 5**

Name six of the main duties of the resident engineer.

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**Question 6**

Name four staff positions that are authorised to conduct inspections.

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**Question 7**

Name the four main elements to be included in an inspector's daily report.

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**Question 8**

Name the four main duties of an inspector.

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**Question 9**

What two things should an inspector do if he/she sees a dangerous situation on a job?

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