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CONTRACT WRITING FOR ENGINEERS

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Introduction

Contracts are frequently part of an engineer's management responsibilities. They can be a handy tool for the project engineer or project manager to use for the control and advancement of his project. Although engineers are not usually trained in the legal field, the successful writing of contracts can be achieved through the use of simple and ordinary language that is logically constructed and framed. Later, it can be reviewed by the legal staff of the engineer's organization or by an independent attorney for the proper legal technicalities and conformance of the language to contract law.

History of Contracts

The origin of contracts can be traced through the historical record as far back as the Code of Hammurabi of the Sumer civilization as early as 1500 BC. It is the earliest Law Code known to exist. Those Law Codes and contract records are in the form of clay tablets written in cuneiform. This graphically illustrates that commercial or business relationships have existed in a fairly complex form since the dawn of recorded history.

The behavior and conduct of the parties to the contract were established in a fair amount of detail by the Code of Hammurabi. In many cases very strict penalties were imposed for faulty performance by either party.

Such severe fines and punishment today would be quite unacceptable in any of our present day cultures. For example, if a contractor in Sumer constructed an apartment building and the building collapsed with loss of life to the occupant, his own life could be forfeited. In today's culture, severe punishment usually takes the form of monetary compensation. In rare cases where negligence is considered to be criminal, the punishment could take the form of incarceration in addition to a fine or civil indemnification. However, the penalty of death would not be an option today for contract enforcement.

Essential Elements of a Contract

A contract must have four essential elements to qualify as a valid contract. The four elements consist of the following:

- (a) Bid and Acceptance
- (b) Consideration
- (c) Competent Parties (be of legal capacity)
- (d) Legal purpose

An offer is a promise made by one party to do or not do a particular act. The act must be defined in a clear manner so that it can be easily understood. A bid is an offer by a contractor or other to accomplish a business related act. The submission of a bid constitutes an offer. A legal offer requires it to have the effect of establishing a legal business relationship between the offeror and the offeree. The offer must define a duty, an act, or an obligation for each party.

A consideration must be described in the contract and is usually done so in the offer but can be described in another part of the contract. A consideration is a value received for a benefit given. It can be of almost token value but is normally something of equal value to the benefit. There is a lot of leeway as to whether the consideration and benefit have to be of equal value. When a beneficiary in a will is granted \$1.00 from an estate the purpose is to show that the beneficiary was not excluded from the will, but that his benefit was carefully evaluated and he was given due consideration. If he was not mentioned in the will then he might later claim that the maker of the will had simply forgotten to do so.

Many times when property is donated, the wording of the transfer document or contract will state that the property is transferred for \$1.00 and other valuable considerations. This is to satisfy the requirement that there was a payment, albeit a token one, made for the benefit received and therefore there now exists a legal and valid contract.

Both parties must be competent to perform and they must have legal capacity. For example, if a party attempts to make a contract with an untrained and unskilled person to design and construct a highway bridge, this would be an unenforceable contract because the party is not competent to perform the act.

For a contract to be enforceable, it must have a legal purpose. A legal purpose generally has a rather broad interpretation. A contract which would result in the violation of a law, such as to commit a crime or any other illegal act, by definition does not have a legal purpose and therefore is void and unenforceable.

Terms of Payment

The terms and schedule for payments need to be negotiated and put into the contract. Provisions in the event that payments are late also need to be determined and placed into the contract. Terms and schedule of payment should be reviewed with the other party to the contract prior to signing to ensure that there has been a meeting of the minds concerning this matter. Schedule of work events and milestones should also be discussed by both parties and an understanding reached of the anticipated progress.

If it is incumbent upon the receiving party to perform certain acts or to give approvals before the contractor proceeds to successive stages of effort, then these contingency events need to be contractually defined and agreed to by both parties. Here, the term “contractor” is used to mean the performing party to the contract or the party providing the services.

Contract Language

When writing the contract for the first time, use simple, ordinary language and write it initially by describing in writing what it is that you want to accomplish. Then after you have completed this initial rough draft of the contract, divide it into categories and sections that are related to each other. This will create an organization to the contract that will give it a natural and sequential flow of language. The sections, headings and paragraphs need to be numbered and/or alphabetized so that specific areas of the contract can be identified and referenced in future separate documents or correspondence.

Do not be overly concerned about, nor too eager, to inject legalese jargon into the contract such as: whereas, party of the first part, upon due consideration received, wherefore, wherein, etc.

When an untrained non-legal person uses such terms, it may lead to confusion as to the intent of the contract. If such terms are truly required, the attorney or legal staff can insert them in appropriate places when they give a final review to the contract. Try to avoid undue complexity when you are writing the contract. The easiest contracts to enforce in a court of law are those contracts that are framed and couched in the simplest of language.

If you use a word which has an ambiguous meaning, try to make another word selection. However, if you must use that word, make an attempt to clarify the ambiguity so that your interpretation of the word is clearly defined. This can be of particular importance if it is a technical word that is subject to a variance of meaning. Write in short sentences; they are easier to interpret and to understand.

When you are dealing with Metric units of measurement, rather than the English system, be sure to make that distinction clear. And of course, the converse is true as well. Normally when you are dealing with engineering matters within a country, it may be assumed that the units of measurement will be of that country. As in all situations when assumptions are made, it is frequently desirable to commit such an assumption to an interpretive writ within the contract.

Circumstance could arise where you are having a product manufactured in a foreign country that uses a measurement system different from your own. In such cases, it is quite essential that the units of measurement be clearly specified and defined within the body of the contract as well as on any relevant assembly, manufacturing or descriptive drawings.

When writing contracts it can be helpful to engage in “what if” considerations. If you can conceive of a situation, which has a reasonable chance of arising that could put your organization in financial or technical jeopardy, you should put a protective clause in the contract to circumvent that possibility. Review past contract history of similar situations to assess the prospect of recurrence. Evaluate trending events occurring in the areas of concern in your contract and use this information to make an informed prediction of adverse future events.

For example, if petroleum shortages seem likely to occur in the future, and your contract is involved with that subject, write the protective clauses necessary to ensure your client against future adverse market forces that may move against his interests. Don't later be caught out in left field wondering what happened when predictable events re-occur.

Contract Form

The contract should have the word “Contract” written within its title to emphasize that it is indeed a contract and not a proposal or any other kind of document. Federal judges have been known to determine that what may appear to be a contract is not a contract in certain ruling precedents. Having the word “Contract” within the title makes that declaration rather clear, especially to the judges who could later rule on its legal intent.

The beginning of a contract has a preamble that is usually called a “recital” by lawyers. Basically it states what the contract is essentially about, who the parties of the contract are to be, and any other pertinent details. The first paragraph of the contract should state the correct legal names of the parties to the contract. It should include the full first and last name and middle initials and other identifying information such as their professional titles or officer position in their companies or corporations. Giving the parties a

nickname, such as their last name, will facilitate referring to them throughout the body of the contract without having to repetitively use their entire names.

All technical concepts and terms should be explained within the body of the contract. Both parties to the contract might fully understand them but judges or juries who may later be called upon to interpret them may not. If they are explained within the contract itself, this will remove any future doubt as to their meaning. The terms and technical concepts should be explained and defined when they first appear in the contract rather than in a separate glossary body.

Numbers should be written as both words and numbers, such as: five (5). This will minimize the likelihood of typing errors or transcribing mistakes.

When words have a significant meaning and you want to emphasize that, you can use capitalization and also quotation marks in front of and behind the word as: “Delivery”.

When using a word with a specific meaning, do not change to a different but similar word at other places in the contract. Use the same word throughout the contract so that ambiguity will be avoided.

Sample legal forms are available on the Internet for free download on some websites. One source for this is: www.homebusinessonline.com/resources/elibrary/legal/ . You may be able to obtain legal forms which resemble the contract which you wish to write. From them you may find ideas of format and organization which can assist in the creation and formulation of your own contract. If you are unable to find what you want on the Internet, there are office specialty stores, which sell various types of blank legal forms that may be of assistance.

Coverage of Requirements

The contract should be comprehensive in that it should cover all the requirements it was your intent to include. It is probably a good idea to make a checklist of all the items you want to include so that you can refer to it as you are writing the contract.

Initially you may leave out one or more items on the checklist but you can add to it as you think of items which may have been omitted. If there are others in the group who are interested parties to the contract, their check lists could be reviewed and added if you are in agreement to their inclusion.

Included within requirements would be such things as:

- Delivery schedules
- Methods of delivery for the product
- Packaging for a physical product
- Method and type of inspection required for the product
- Verification of the inspection

- Documentation required to verify type and quality of materials used for the product
- Paint or surface finish
- Software and/or drawings for the product
- Maintenance/Parts manuals for the product, etc.
- Warranties or Guarantees of product

Deliverables

Deliverables can run the gamut from tangible to intangible or abstract, software, hardware, drawings, services for management, services for supervision, services for logistics planning and operation, It can include any other human activity which you can envision that will benefit your activity or mission. Contracting-out has become more and more popular with federal agencies and most state governments and with all branches of the U.S. military.

This contracting-out trend is probably somewhat more unique with the current U.S. administration than with the governments of other countries. The principal reason for the increased use of governmental contracting-out is that it allows a rapid buildup and expansion of a particular activity, When the need is over, that activity can be quickly dissolved. Since there has been no bureaucratic buildup of a governmental body, there will be no necessity of large layoffs or a mass discharge of governmental employees.

A review of the conflicts in Iraq and Afghanistan revealed an enormous amount of support activity by civilian contractors. They were involved with armed security missions, logistics, meal distribution, mess hall operations, aircraft maintenance and many other operations related to the military mission.

These armed conflicts used more contractual operations for direct mission support than were used in any other previous conflict. This is mentioned to illustrate the growing use of and increasing importance of, contracts in the role of current government activity. Because of this increasing use of contracts it is more important than ever to understand the details and nuances of writing both performance and acquisition contracts.

When a contract is made with an Architect, the deliverables are partly abstract, i.e., his concept and design of a building, but they are also partly physical, i.e., the drawings for the construction of that building, and for his supervision of the construction. In addition, he may provide his services for the landscaping of the building's site or the supervision of that design effort. This clearly illustrates that the deliverables can be quite varied and multiple in their total context.

When the Defense Department purchases a fleet of new aircraft, the deliverables could consist of the following as a minimum:

- Specific number of the aircraft
- Spare parts for the aircraft
- Maintenance tools and equipment

- Training of mechanics to perform the maintenance
- Aircraft drawings, assembly and maintenance drawings
- Aircraft pilot simulator equipment and pilot training
- Maintenance management software
- Operational flight test programs and data

To summarize, deliverables need to be determined for each particular contract and will quite likely vary greatly from contract to contract.

Incentives for timely completion

When it is important to accelerate or ensure timely completion of deliverables for a contract, incentive clauses can be a valid consideration. While it would be wasteful of resources to give an incentive payment or inducement when it is not necessary to do so, it can be good management practice when delivery of a product or service needs to be expedited for compelling reasons.

Some reasons could be for public health, safety and convenience or for the accomplishment of a vital or strategic mission of an organization. An example of justifiable incentives could be for the CDC (Centers for Disease Control) to pay an incentive to pharmaceutical companies to manufacture a needed vaccine in order to meet a public health threat in a timely manner. Or it could be justified, to motivate the development of a new method for the rapid production of a new vaccine.

When it is of value and importance to the owner of a project to gain early completion, then the contractor can be given an early completion bonus to provide an added incentive. This would be written into the contract between the owner and the contractor and the details agreed upon by the two parties prior to signing of the contract.

Penalties for late completion

A method of focusing the contractor's attention on completing the project on time would be to provide a liquidated damages clause in the contract. The clause would call for a stipulated amount to be paid to the owner for each day the completion is delayed beyond an agreed upon completion date. The liquidated damages clause must be available to the contractor prior to bidding since he must be aware of its presence because it can influence his bidding amount for the contract.

The liquidated damages amount must also specify the expected monetary losses to the owner for late completion. Courts will not allow unrealistically high amounts since they can be regarded as punitive in nature and will be disallowed or discounted in event of litigation. If the amount of liquidated damages are not defined in the clause, courts can then allow actual consequential damages in the event the owner invokes the clause and is awarded damages.

Acts of God, War, Riots, etc

Acts of nature that occur without intervention of, or due to a causative action of man; are called Acts of God. Some examples of these are: tornados, storms, floods, snowstorms, earthquakes, meteors, volcanic eruptions, hailstorms, meteorological phenomenon, etc. Many contracts also invoke exceptions or exemptions for conditions that occur due to war or civil disturbances such as riots or civil insurrection. When writing contracts, many of these exclusionary clauses should be included when these conditions are considered to have a reasonable chance of occurring.

Due to recent changing worldwide geo-political and socio-military conditions within the last decade, many insurance policies and some contracts now routinely contain exclusionary clauses to protect against financial damage or losses caused by terrorist actions. The catastrophic nature of many present day disasters, whether natural or man-made, now compels one to focus more attention upon their possibility and to take that into consideration when writing contracts.

Outsourcing Considerations

Outsourcing of goods and services to foreign countries has become increasingly popular over the past two decades and many corporations have been eager to avail themselves of the cheaper labor. This outsourcing has even been extended to such technical services as engineering, architectural planning and the design and coding of software. Some corporations are now beginning to have second thoughts about foreign outsourcing due to the risks and hazards of industrial espionage and poor intellectual property safeguards. The countries of main concern now appear to be China, Russia and India.

Some outsourcing advisers recommend that contracts contain an indemnification agreement with the outsourcing provider and assurance that he has significant assets within the United States in the event of a lawsuit judgment. Another recommendation is to obtain insurance for the source code. India did more than \$1.2 billion in 2004 from business process outsourcing and expects to do \$15 billion within the next decade. Business process outsourcing (credit cards and call centers) can create serious issues about personal data protection for customers who are based in the United States.

There have been reports of cases in India where U.S. based companies have had their copyrighted designs appropriated by the foreign manufacturer who later claimed ownership of the complete product line of copyrighted design. In one particular case, the lawsuit brought in a court in India lasted for almost two years with no prospect in sight for a conclusion of the case. Diplomatic officials advise that some court cases become almost intergenerational in that they progress so slowly.

When writing contracts involving foreign outsourcing, considerable caution needs to be exercised with providers to ensure protection for intellectual property rights.

Other Contractual Clauses

Intellectual Property Ownership is a subject that may need to be addressed should ownership questions develop from activity undertaken within the contract. For example, if you contract to develop an original and novel design as a deliverable item of the contract, the patent rights to that design should clearly be defined. This may require a negotiated meeting with the other party to the contract so that an agreement and a meeting of the minds can occur before the contract reaches a final draft.

It is conversely true that if the other party is being required to create a unique intellectual property for your benefit, it is important to have a meeting of the minds to establish the sole or joint ownership of the intellectual property which is to be developed. The modern context of such a situation can occur if you are requesting another party to develop unique software for your own business requirements. Failure to establish the intellectual property ownership within the contract, could result in the other party laying claim to intellectual property rights to the software and to any resulting marketing opportunities.

You may want to consider writing a cancellation provision into the contract. This can provide an avenue for escape in the event that unforeseen circumstances arise which could make nullifying the contract an attractive option. The other party may also want such a provision in the contract to protect his own interests as well.

The cancellation clause should also give financial details regarding how the parties would settle the contract if a cancellation clause is invoked by either party or by both parties with mutual consent. In the event there is a contract dispute, certain types of evidence should be preserved to support your claim in court. Principal evidence would be: (a) Receipts (b) Invoices (c) Cancelled Checks (d) Journal, of your daily business activities and involvement.

There are other means of settling a dispute other than litigation in court. Clauses can be added to the contract which can allow the parties to specify how they would elect to handle problems of dispute. These clauses may be called Dispute Settlement Clauses. They can establish that disputes would be handled by Mediation or by Arbitration.

There are several advantages to settling disputes by mediation or arbitration rather than by litigation. Primarily these advantages are that it is less expensive to take this route and the time for resolution is usually much quicker than litigation.

Mediation involves a process where a third party (a mediator or a panel of mediators) confers and meets with the parties to the dispute. These meetings are held to assist them in coming to an agreement on a settlement. A disadvantage to this process is that it is a non-binding process.

Arbitration is very similar to the mediation process with the exception that the decision made by the arbitrator is not simply a recommendation but is a binding decision. The

decision must then be accepted by the disputing parties to the contract or agreement. The American Arbitration Association has established rules of arbitration.

An Arbitration Clause, when included in a contract or an agreement, would simply state that all parties to the dispute agree to have the arbitration settled according to the rules of the American Arbitration Association. It would further state that when a settlement decision is reached by the arbitrator, the decision may be entered into any court of law which has jurisdiction over the dispute.

A Concealed Conditions clause can protect you from unforeseen circumstances which can render a contract unprofitable. An example would be for a contractor to later discover a large hidden rock or other concealed subterranean material while conducting an excavation for a road surface. Another example would be for a remodeling contractor to unexpectedly encounter toxic materials, which would require expensive abatement procedures that were not included in his bid.

If you do not have a Concealed Conditions clause in the contract, you may be required to litigate to recover any loss caused by concealed conditions. Many state courts will not allow the winning party of a lawsuit to recover the cost of attorney's fees absent a provision for that in the contract. For those states, a winning party in a lawsuit will have his recovery for attorney fees enhanced by having the attorney fee clause stated in the contract.

Contingency Clauses

If a contract specifies that purchase of a property, item, or service is dependent upon sale of another property, item, or service before the contract will issue, that stipulation can be described as a contingency clause. There can be other stipulations or situations surrounding a contract, which need to prevail before all the conditions are deemed to be in place for the performance of a contract. Again, these can be broadly described as contingency clauses. Not all contracts have need for contingency clauses but some do and a determination may need to be made for each contract in that regard.

A contingency clause in a contract may specify that a particular event must occur (or not occur) at a specific point in time before the contract becomes actionable. If you are purchasing a house, you may place a contingency clause in the purchase contract to the effect that your present house must be sold by you before the purchase contract becomes actionable. Contingency clauses are very common in real estate contracts because they allow the purchaser to minimize and to stipulate his financial commitment when purchasing a new home.

Trust funds also utilize contingency clauses when being established for someone who has not yet attained majority. Sometimes the trust funds may defer first payment until the subject has attained 25 years of age or more, on the premise that financial judgment increases with age.

Modifying the Contract

It is a natural reaction for both parties to want to change the terms of the contract after work has been in progress for only a short time. One party may want to increase the scope of the work. The other party may have underestimated the amount of time required to complete certain phases of the contract and wishes to be paid more for that effort. While agreements to modify the contract can be made orally, it is not a good business practice to rely only on an oral agreement. Any and all changes to the contract or agreement should be made in written form. When changes are written, they are easier to remember, understand and to be enforced in event of a dispute.

The entire process of modifying the contract by mutual agreement can be greatly simplified by having a clause in the contract, which specifies how this can be done. The clause would require that all amendments be in writing and signed by both parties. To be enforceable, a change in contract scope that increases responsibility and effort must allow a consideration for that change in scope. The party having the increased burden of work must receive more monetary or other compensation in return for that increased level of work.

On the other hand, if an increase in allowable time to complete the contract is given to the party providing the service, then a reduction in fee or another form of compensation must be given to the party giving the increase in allowable time. This follows the contract protocol of giving due consideration for a received benefit.

Neither party is required to accept any proposed changes to the contract. However, both parties have an obligation to deal in good faith when considering any proposed changes to the contract. The requirement to deal fairly and in good faith means that all reasonable requests for modification must be entertained and a sincere attempt made to reach a resolution.

Making Contracts With Minors

When making contracts with a minor it must be understood that a minor can rescind or revoke a contract at will. There may be some exceptions in some states, for consumable goods and services such as food, drink and lodging. For contracts of a technical nature or for physical items, it can be assumed that a contract with a minor is a very tenuous document that is revocable or voidable at will at any time by the party who is a minor.

Given that premise, serious consideration should be given to avoiding any contracts with minors with a possible caveat. That caveat would be to require the minor party to obtain a third party who has attained majority, that would become financially responsible for the minor within the context of that contract. This procedure is utilized every day in the business world when minor parties are required by financial institutions or businesses to

have a third party sign onto the contract as a guarantor of contract performance for the minor.

This in effect, transforms the contract into one that is between two parties who are both of majority with a minor becoming a participant whose own performance is guaranteed by the affirming guarantor party. If enforcement of the contract becomes an issue at a later time, then adjudication would involve both the minor party and his guarantor. In most cases, clauses in the contract would stipulate that adjudication would not be required to collect from the guarantor party if the minor defaults on the contract. But if adjudication is required, the guarantor would be required to pay for the default and for any attorney fees and costs involved in the collection of damages. Conversely, the minor and his guarantor also have a similar right to legal redress if their collective contractual interest within the contract is believed to be compromised or transgressed.

Conflicts of Interest In Contracts

Conflicts of interest in contracts must be avoided to preserve the integrity of the contract and the integrity of all parties and organizations involved. It should be made a matter of routine to scrutinize the contract for detection of any existing or potential conflicts of interest on the part of either party and to resolve the matter before the contract is signed.

A conflict of interest can be defined as a situation when a party to a contract has competing professional personal obligations or financial interests that would make it difficult to fulfill his duties under the contract in a fair and just manner. Another way to put it is that when a personal interest prevents a party from acting to serve the contractual interests of the other party to the contract when he is obliged to do so, then it can be considered to be a conflict of interest.

Many potential conflicts of interest can be complex and not always clearly discernible. It is situational in nature and not necessarily behaviorally driven unless it is acted upon by the party who has the conflict. Conflicts of interest can be actual or they can merely be potential. They can be individual or they can be organizational.

A conflict of interest may result from a party's organization or company and not from the party who is acting as an individual. However, in the contract, the party may be acting as an employee and an agent of his organization and the net effect upon the contract can produce the same harmful result to the injured party.

Contract Review

When completed, the contract should be submitted to the legal staff of your organization for its review. If there is no legal staff available, then it should be reviewed by an independent attorney who has expertise in contract law and can give it a proper review for conformance to legal contract language and any required legal protocols.

For contracts that involve outsourcing to a foreign country, a final review of the contract should be made by an attorney who is experienced and competent in international law and commerce relating to intellectual property rights protection and other related legal protocols of an international nature.

Happy contract writing!

Disclaimer:

The author of this course is a professional engineer but is not a licensed attorney and the information presented herein, although useful, is not intended to be used as legal advice. Consult an attorney if you have legal questions pertaining to the contract you are drafting and have your final draft of the contract reviewed by a licensed practicing attorney.