

THE PRINCIPLES OF SPECIFICATION AND AGREEMENT WRITING.

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Fifth Article.

GENERAL CLAUSES.—Continued.

The general clauses of the specifications differ from the specific clauses in that they refer to the general office and field relations of the parties rather than to particular operations or details. Where specific regulations are inserted in the general clauses they refer to matters which do not directly enter into the construction of the work but are preliminary or relative to the project. Provisions of this sort would concern such matters as instructions to bidders, security or payment to the Contractor.

There is some difference of opinion as to which of the general provisions of the contract should be incorporated in the specifications under the head of "General Clauses" and which should be reserved for the agreement. It is the writer's opinion that the division should be made on the basis of the uses to which the written contract will be put. The engineering staff, with the exception of the chief engineer or engineer in full charge of the project for the Owner, seldom requires to consult those stipulations concerning the legal or business responsibilities assumed by the Contractor, but any assistant engineer or inspector may require to inform himself respecting any feature of the construction of the work, the payments to be made for it, the direction of field operations, or, in fine, any provision defining the duties and authority of the Contractor or the representatives of the Owner on the work. For this reason, it would appear that all those clauses which concern the normal working of the contract, including such incidents as charges, extras or defective work should go in the specifications while clauses referring to legal or business responsibilities or to abnormal happenings, such as forfeiture of the contract or settlement of disputes, and with which only the original contracting parties and the chief engineer would have to deal, should be placed in the agreement. The specifications then become purely a code of working rules for those who may have to do with the actual prosecution of the work or design or construction, while the agreement becomes a document to which reference need be made only in case of serious disputes, unusual situations or the final settlement.

Of such great variety are the matters treated in the "General Clauses" of the specifications that it is impracticable to mention here more than a part of those which frequently find a place in specifications. The subjects which might advisedly be covered in the "General Clauses" of the specifications forming a part of a typical construction contract, and following the relationship between the specifications and the agreement outlined above, would be as follows:

- (1) Definition of Terms.
- (2) Contractor's Undertaking.
- (3) Plans and Specifications.
- (4) Character of Work.
- (5) Inspection.
- (6) Conduct of Work.
- (7) Alterations.
- (8) Extra Work.
- (9) Duration of Contract.

- (10) Powers of the Engineer.
- (11) Estimates and Payments.
- (12) Security.
- (13) Instructions to Bidders.

(1) **Definition of Terms.**—The terms which require to be defined in the "General Clauses" of the specifications are principally those referring to the contracting parties or their representatives, technical terms presumably having been defined in the specific clauses. Thus, the word "Contractor" might be interpreted by an inspector to mean either the general contractor or a subcontractor, unless the particular one meant is explained in the specifications. "Corporation" might, unless limited in its application, refer to a contracting municipal corporation or to the private corporation with which it contracts. If there were more than one municipal corporation involved in the contract, it might refer to any one of them. "Company," "Board," "Commissioners" or any such bodies having mention in the specifications should for the convenience of those whose duty it is to enforce the contract be defined in the specifications and not merely in the agreement, which, indeed, they may never have occasion to examine. So many engineers are associated with a work of any magnitude that the word "Engineer" should be clearly defined. It might mean the Owner's engineer, any consulting engineer who might be retained for special services, a resident engineer or the Contractor's engineer. Definiteness is, therefore, imperative in this matter. "Inspector" should be defined so that, for example, any municipal councillor who chooses cannot hand out instructions to a Contractor under the pretext of being a special inspector.

(2) **Contractor's Undertaking.**—This description of what is to be undertaken by the Contractor does not refer, except perhaps indirectly, to the extent or character of the work which is to be finally delivered up to the Owner, but rather to those things which the Contractor must furnish in order that work of the kind required by the Owner may be secured. He must provide all material, labor, tools and appliances necessary to the completion of the work in accordance with the intention of the contract. It is also advisable to state that the provision of all these things is to be covered by the prices named by the Contractor in his tender, and that no further remuneration may be claimed under this head.

(3) **Plans and Specifications.**—The necessary general provisions relating to plans and specifications may be grouped roughly under the divisions of interpretation, conformity on the part of the Contractor, responsibility for accuracy and feasibility.

The engineer, as the author of the plans and specifications, should have the right of interpreting them, for he should know, better than anyone else, precisely what was meant. To him should be referred for rulings all questions of conflicting and erroneous statements, whether of graphical or written character. In decisions of this sort, it is obvious that the judgments of the engineer should be in strict conformity with the true spirit, meaning and intention of the contract as a whole, and it is the universal custom to specify that this broad view of the contract shall prevail. Errors and omissions in plans or specifications should therefore not be allowed to justify the Contractor in furnishing less than was clearly contemplated in the contract, and he should be called upon to perform all work which may reasonably be inferred as necessary for the complete fulfilment of the spirit of the contract, although certain requirements may, through oversight, not have been stated. In making such a ruling it would manifestly be dishonest for the