

Baseline Drawings – Contractors/Sub-Contractors Beware

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Introduction

Most construction contracts are drafted to clearly define the design responsibility for both the permanent and the temporary works. Such responsibility is normally apportioned between the employer, including his contract administrator (i.e architect, engineer, etc) and the contractor. Alternatively, the contractor can be made wholly responsible for design work, as normally specified for design and build contracts.

However, in some instances, the design of a specialist trade, installation or feature is made the responsibility of a third party, for example a specialist cladding contractor, whose design drawings are generally required to be approved by, amongst others, the employer.

This article deals more particularly with the design of the permanent works and in situations where the responsibility for the design of such works rests wholly with:-

- the employer (and/or his contract administrator); or
- the contractor (design and build contracts).

Design of the Permanent Works by the Employer

The contract administrator often produces a detailed design following an approval process involving outline plans, refinements, mock-ups and possible further refinements. Such detailed design is normally shown on a series of drawings.

Traditionally, the series of drawings is assembled in a bundle, together with specifications, other documents particular to that project and a set of contract conditions and are collectively known as tender documents. Sometimes there is also a bill of quantities. The tender documents are then sent out to, or released for collection by, a number of contractors who are invited to submit competitive tenders for constructing the works shown on the drawings and described in the specifications. The drawings included in the tender documents are normally referred to as the tender drawings.

The design shown on the tender drawings will normally include details of how the works are to be constructed and is likely to comprise construction details which have been developed over years of experience and which have become contemporary standard and/or typical design details utilised throughout the industry.

In estimating a tender price, a tenderer will have an implied, or often express, obligation to include in the tender for all of the details shown on the tender drawings.

Once a contract has been awarded, a set of contract documents will be assembled based upon the tender documents. It is common for the set of drawings, included in the tender documents, to be listed at a suit-

able location in the contract documents and to be later referred to in the contract as the contract drawings. The original tender drawings may, of course, be revised before becoming contract drawings.

Such drawings should be used by both parties as the 'baseline' drawings in order to determine:-

- the exact nature of the works to be undertaken by the contractor and, thereby, included within the contract sum (in conjunction with reference to the specification, contract conditions and other documents forming part of the contract); and
- what constitutes a variation to the works shown on the contract drawings.

Design of the Permanent Works by the Contractor

On design and build contracts, the contractor is entirely responsible for the contractor's design of the permanent and temporary works. The permanent works design will normally have to conform with the requirements set out in the employer's general scheme drawings and design criteria, which are usually provided by the employer as part of the tender documents and which ultimately become part of the documents included in the contract.

In producing a detailed design, the contractor will normally follow an approval process similar to that described above for the contract administrator under an employer design contract. Similarly, the contractor's detailed design will be shown on a series of drawings, which will normally be developed to become the approved working drawings.

On such contracts, the contractor's approved working drawings, which are based upon the employer's general scheme drawings, together with the employer's general scheme drawings may be referred to as the 'baseline' drawings.

For there to be a variation on a design and build contract emanating from a change shown on the approved working drawings, which in turn may lead to an adjustment of the contract price, the employer must cause there to be an instruction which:-

- revises the general scheme drawings and/or the design criteria; and/or
- amends the originally approved working drawing;

Employer's Standard Details

A number of developers and, of course, some government departments, have their own standard design details for particular items of work, such as manholes, hand railing and the like, causing there to be uniformity and standardisation throughout their various developments. Drawings showing such standard design de-

tails may be included or referred to in the contract as the 'employer's standard design drawings' or 'employer's standard details'.

Great care must be taken by contactors and sub-contractors in circumstances where employer's standard design drawings form part of the contract documents.

Contractors Beware

On contracts where the employer is responsible for the design of the permanent works and where employer's standard design drawings form part of the contract documents, the employer (and/or his contract administrator) ought to indicate clearly where a standard detail from an employer's standard design drawing has been included or adopted on the contract drawing (i.e. the particular design drawing) for that contract.

Use of an employer's standard design detail may be indicated clearly by way of:-

- replicating the employer's standard design detail on a particular design drawing for that contract;
- circling and signposting a location indicating that an employer's standard design detail is to apply to that location; or
- the inclusion of a note on the particular design drawing stating that an employer's standard design detail is to apply at a specific location.

If there is no indication that an employer's standard design detail is to apply at a specific location and the particular design drawing shows details at variance to the details shown on the employer's standard design drawing then the contractor has an obligation to have included in his tender for the details shown on the particular design drawing for that contract.

'Great care must be taken by Contractors and Sub-contractors in circumstances where employer's standard design drawings form part of the Contract documents'

Sub-Contractors Beware

On design and build contracts, where the contractor is entirely responsible for the design of the permanent works and where employer's standard design drawings form part of the contract documents, the contractor usually has an obligation to incorporate details from the employer's standard design drawings into his particular design drawings at the appropriate locations.

In circumstances where the contractor requires the adoption of the employer's standard design details on the particular design drawings for that contract, then the contractor ought to identify clearly where such standard design details are to apply, by use of any one or more of the methods described above.

There may be circumstances, however, where the contractor has incorporated details on the particular design drawings, which are at variance to the details shown on the employer's standard design drawings and a do-

mestic subcontractor has been given the former particular design drawings upon which to tender and has not been advised of the employer's standard design drawings. In these circumstances, the domestic subcontractor's baseline position is represented by the details shown on the contractor's particular design drawings.

There may be other circumstances, where a domestic sub-contractor has been employed by a contractor to undertake the works, or part of the works, and the contractor has made reference to and/or has furnished the sub-contractor, at tender stage, with both the contractor's particular design drawings for that contract and the employer's standard design drawings. In such circumstances, the sub-contractor has an obligation to include within its tender price for the design shown on the contractor's particular design drawings for that contract and, as far as they are not inconsistent therewith, the employer's standard design drawings. In these circumstances, had the contractor wished the employer's standard design drawings to prevail over the contractor's particular design drawings then it should have said so.

Summary

In the above examples both the contractor and the sub-contractor should refer to the particular design drawings when pricing the contract works, or sub-contract works, as:-

- 1.0 The employer's standard design drawings comprise a library of standard details/information:-
 - 1.1 from which the designer (i.e. the employer in the first case and the contractor in the second case) may abstract the said details and may use the same on the particular design drawings for that contract; and/or
 - 1.2 to which the designer may make specific reference by adding a note, or notes, on the particular design drawings for that contract.
- 2.0 Although the employer's standard design drawings comprise a general library of information, not all of the standard design details shown on those drawings may be relevant to a particular contract.
- 3.0 There may be provisions in the contract which permit acceptable changes/amendments to the details shown on the employer's standard design drawings included in that contract.
- 4.0 The designer may have submitted requests for deviations from the employer's standard design drawings and had such deviations approved by the employer.
- 5.0 It is established procedure in the construction industry that particular design drawings take precedence over standard design drawings when considering the design of building and civil engineering works.

When pricing the contract works, or sub-contract works, the contractor and/or the sub-contractor respectively has an obligation to include allowances in its prices for the works shown on the particular design drawings, especially, as stated in item 4.0 above, it is possible that the designer may have submitted requests for deviations from the employer's standard design drawings and had such deviations approved by the employer.

If there are differences between the details shown on an employer's standard design drawings and the details shown on the particular design drawings for that contract then the details shown on the particular design drawings would take precedence, as identified at point 5.0 above. However, if there were no differences between both sets of drawings then the design details shown on all drawings would apply as the contract documents are normally described as being mutually explanatory.