Highway Contract Administration– Its Problems and Treatment

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• CONTRARY to views of most contractors, lawyers working at the various levels of government learn from almost their first experience with public contracts, that the sovereign has no special advantage in the formulation of the written document. Only those of the uninformed public exclaim that they would rather represent the government in any contract question. In fact, the courts in New York State have held that the State has a definite duty and responsibility in making contracts with its citizens. The courts unanimously declare that in performing that duty, the State must set a standard for "fairness, justice, equity, honesty and plain frank statement of its purpose, without subterfuge or circumlocution, and shall be beyond all criticism as being in any way possible of deception." Courts in other states have expressed themselves similarly. In face of this admonishment by the courts, the duty of the government lawyer becomes clear. He should and must approach the preparation and administration of such contracts within the strict standards that are imposed upon him.

Highway construction contract administration poses many problems, both engineering and legal. In meeting these problems, the care used in forming the language of the instrument is of the utmost importance. The usual case finds the contractor presented with a contract that is written by representatives of the government and for that reason, when the language is in doubt, the courts construe the words most strongly against the party who writes them, the sovereign.

CHANGED CONDITIONS

The complexities of contract legal construction are most apparent in the area of highway contract administration that generally is termed as "changed conditions." These changed conditions may result in performance of either "extra work" or "additional work" by the contractor. The terms are not synonymous. Extra work usually arises outside of, and entirely independent of, the contract and is not required in its performance; whereas, additional work usually results from a change or alteration in work that has to be performed pursuant to the contract and might arise from conditions that could not have been discovered until the specific work of the contract was actually undertaken. Whether changed conditions result in extra work or additional work performed by the contractor has been the subject of argument between the contracting parties and too often becomes the subject of litigation in the courts, a result that is very expensive for both the contractor and the state.

I will review very briefly, within the limits of the time allotted, the Federal treatment of this problem and contrast it with the New York State method, a method which many other states also employ. These views seem to represent the two general schools of thought for treatment of this problem.

The Federal government has endeavored to treat and reduce the risk of changed conditions as they affect the contractor by the inclusion in all Federal construction contracts of a requirement that the contractor immediately notify the contracting officer of (a) subsurface or latent physical conditions at the site which differ materially from those indicated on the contract or (b) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the contract.

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The contracting officer must then promptly investigate the conditions, and in a proper case, he may make an equitable adjustment and modify the contract accordingly.

However, New York State highway construction contracts do not contain a provision similar to the Federal government's "Changed Conditions" article. With respect to subsurface conditions, the New York State Public Works Specifications of January 2, 1962, provide:

> Whenever subsurface borings or other subsurface information obtained by the Department is available for a bidder's inspection, it is understood that it has been obtained with reasonable care and recorded in good faith with reasonable interpretations placed on the results and character of materials and conditions to be expected. The bidder must interpret this information according to his own judgment and not rely upon it as accurately descriptive of subsurface conditions which may be found to exist. The information is made available to the bidder only in order that the bidder may have access to the identical information available to the Department.

This provision means in effect that the contractor is expected to accept full responsibility for subsurface conditions encountered on the site except those resulting from faulty design or misrepresentation. The New York State Department of Public Works cooperates fully with the contractor and makes available to him, as well as other bidders, all information on subsurface conditions that it has available. If subsurface conditions are encountered which depreciate the construction design features, the Department of Public Works will initiate and authorize procedures to adapt the design. Such adaptations usually take the form of increases in quantities of excavation, foundation piles, sheeting, concrete or gravel. The unit bid prices for the items are not modified. The Department of Public Works endeavors to have a complete engineering design and to have the subsurface structures and conditions fully tested and supported by borings and laboratory tests. What we are saying, in effect, to the contractor is "We put reliance on our boring data but we acknowledge that variations in texture, slope, earth strata and ground water are prevalent and that uniformity should not be surmised—therefore, you should make your own borings and subsurface investigations in order that you will be apprised so far as possible of conditions at the site. However, we honestly believe that our borings will factually show the actual subsurface conditions at the site and we offer to make them available to you together with any other information that we have on the subject." Of course, this procedure is a gamble of sorts to the contractor but it appears from our experience that seasoned contractors would not have it otherwise.

In New York State the contractor is not without a remedy. The State has a "disputed work" procedure which affords the contractor an opportunity to be heard when claiming extra work. If the work is determined to be extra work, a supplemental agreement is negotiated with the contractor. If additional work is involved, the unit price for the item is paid for this work. If the Superintendent determines that the disputed work is contract work, the contractor may still disagree with him and pursue his remedy in the State Court of Claims.

We have never been entirely satisfied with either the equity or effectiveness of our State procedures. We have always held to the basic view that a contractor who feels "short-changed" as a result of the conditions outlined will utilize every means to secure compensation in some form through either "curricular or extra-curricular" activities. After all, one of the basic concepts of sound contract procedure is to effectuate the exchange of "honest" dollars measured in terms of "honest" work. No more—no less! Any procedure or practice which defeats this principle must only lead to either litigation or an attempt by the contractor to remedy the imbalance in his own way.

STRICT COMPLIANCE VS PRACTICAL APPLICATION

Following the problem of the contract's legal construction is the problem of contract application. This is the area of strict compliance to the legal letter of contract law

under common law rules vs the practical engineering approach used to obtain a final result. In highway contract administration, care must be used to balance both of these views in order to obtain the desired result most expediently and at the minimum cost. I know of no genie who can balance these views and come up with the best results everytime, but experience in this area is an excellent guide. Therefore, good contract administration requires that a large amount of discretion and flexibility be delegated to the experienced contract engineer-administrator so he can use this experience to perform this important balancing function.

PRELIMINARY ACTIVITY

Critical attention should be given to three areas of pre-activity in order to determine what aid they may offer in minimizing delay in progressing construction contracts. First, consider the use of a system of pre-bidding qualification. In New York, we lean to the position that such a system is not especially effective and our experience has not revealed that there is a compelling need for such procedure. In fact, in our view, it adds to the time factor needed to process administratively the contract after the "low bidder" has been ascertained when the bid box is opened at the letting because our interest is primarily in the qualifications of the low bidder rather than a group of several bidders. The low bidder's qualifications are adequately determined before an award is made to him. The State at that point has no interest in the qualifications of the unsuccessful bidders.

The system of pre-bidding qualification is tied in, to a large degree, to the contractor's past performances in similar work and, in particular, those projects he has performed for the State. Mere possession of adequate financing and equipment is not the governing criterion. New or little known contractors, who, incidentally, may well be equipped with management, manpower and equipment sufficient to handle the project, would be faced with the difficult and costly task of establishing their qualifications. The results could well be that on many projects the number of bidders would be diminished. This would work to the detriment of the State and the cost of projects could increase because of limited bidding by the same few contractors. We think it does not give as free play to the competitive process.

The second suggestion for examination is the use of a system of pre-award qualification. Although this system is closely akin to the first suggestion, it is more practical because a determination is being made as to the responsibility of the low bidder and his capability to complete the contract satisfactorily. Of course, time can be saved if the bidder has had prior experience with the State because the "book" on the bidder can be up-dated with little additional work.

The third area which we feel offers great opportunities for reducing the time required to initiate and complete projects is pre-construction conference. A typical conference would include an invitation to the contractor and "other concerned parties" in interest to meet with the State's representatives in the District Office where the project is to be performed. The contractor is required to present his schedule of operation so that all possible points of conflict can be determined, discussed and then resolved. The District Engineer conducts the conference and uses a check list, which he has drawn up from experience at many other similar conferences, to ascertain that all areas are completely covered in an orderly fashion.

The other concerned parties are very important. A major problem in almost all projects is the coordination of the utility company's activities so that the project is not seriously delayed once under construction. Knowledge of the work schedule can save money because it allows the affected parties, both utilities and contractors, to preorder any specialized equipment or material that is necessary. Lower costs may result because of the ability to time the purchase and secure a precise delivery date. Further, public relations play a major role in the conferences. The local officials must be alerted to traffic problems such as traffic delays, congestion on other routes and detours that become necessary as a result of the planned improvement. The police and fire departments must know what effect the construction will have on their responsibilities.

From this sketchy outline, you can readily appreciate the importance of the coordination needs which such a conference can bring about. If the conference is not used, then the contractor and the State would have to do their own arranging after the fact which would, of necessity, entail a greater length of time and possibly not cover the requirements of all the interested parties. This would lead to improvisation and delay—two of the arch enemies of effective project progress.

LUMP SUM BIDDING

There is a school of thought which holds the view that lump sum bidding would reduce materially the problems in contract administration.

The unit price system is most useful and virtually imperative when conditions make it difficult precisely to establish the quantity of work to be performed or when unknown conditions may be encountered. Such conditions occur primarily in excavation work because of the lack of knowledge of the precise surface and subsurface conditions. The unit price system allows for the use of estimates and calculated estimates for the bidding process with the accurate determination, upon which the installments and final payments are based, to be made as the work progressed. Almost every contract that calls for use of this system will end up with changes in the total contract price reflecting the increase or decrease in the items due to actual measurements.

Lump sum bidding, on the other hand, is practical only when the work is of a definable and exact nature and quantity. In highway construction, such items might include clearing and grubbing of the right-of-way, staking-out of the project, traffic control, bridge superstructure above the footings and surface pavement construction. However, lump sum bidding is not practical where the items tend to vary in quantity.

With the use of lump sum bidding, either the contractor or the State would have to determine with a high degree of accuracy the nature and quantity of work that is entailed in the project. This design accuracy would require substantial engineering expenditures. If a system was adopted which placed the risk of variance and the duty of calculation of work requirements on the contractor, the results would, of necessity, mean higher bid prices to cover this risk and the cost of the work involved in making the accurate determinations. If the State makes the determination of the quantity of work required and indicates this determination on the contract, then the contractor could recover additional sums when unknown factors are encountered because he is performing work which the contract does not enumerate. The paper and admininstrative work involved when there are numerous variances would be quite burdensome in addition to substantially increasing the State's cost for preparation of plans as well as supervision.

No matter which system is used, the project must still be performed according to the established specifications and would require inspection so that the problem of quality supervision would not be lessened by the adoption of one system over the other.

Any radical change from one system to the other would require a great deal of adjustment by and "education" of the contractors. For instance, many contractors are equipped to bid under a unit price system where estimates of the work requirements are used because they know that adjustments will be made later at the unit prices to reflect the actual measurements, but they would be unable to cope with the task of estimating the total job for a lump sum bid. In a big project, this risk could well encompass a substantial amount of money.

The determination of the best system for highway contracts is not a simple one. Possibly, it lies in a hybrid form incorporating some of both systems. Lump sum bidding could be used for such items as clearing and grubbing, staking out of the project and traffic control, with unit price bidding used for the remaining items, many of which are apt to vary in quantity.

No discussion of unit price bidding should ever conclude without touching on its one principal vulnerability—unbalanced bidding. Extreme caution must be exercised in reviewing unit price bids to contrast them with the engineer's or Department's estimate as well as the competitive bids on the same project which, although higher, may nevertheless furnish interesting and helpful comparisons. An "unbalanced" bid item is one which greatly exceeds the engineer's estimate for the same item. When discovered,

a careful recheck is undertaken to ascertain whether the quantity or number of units are correct and reasonable and do, in fact, reflect the actual quantity necessary for project completion. Steps are also initiated to insure as much as possible that there will not be an appreciable overrun in the item. Such checking will often uncover errors as to quantities enumerated in the bid proposal so that correction can be made while still possible.

The entire area of bidding is one that we would strongly recommend be the subject of review and analysis by the newly-created Department of Legal Studies.

SUPERVISION AND INSPECTION

A group of State engineers, headed by an engineer-in-charge, are assigned to each highway construction project to supervise its construction and to maintain an equitable balance in contractual obligations. The inspection of the contract work consumes the bulk of the engineers' physical energies. The continual striving and planning to achieve the best possible job, with the least possible disaccommodation to the general public, the utilities and the local industry, will demand close supervisory control over the construction project and flexibility by the State engineers assigned to the project. The engineer-in-charge and his men must exercise what is known as construction control. Construction control is a method—as well as a process; it is a blend of experience, training, judgment and just plain horse sense. These factors, in order to be effective, must be applied continuously from the very inception of the job down to the finish. Its purpose is the translation of the contract plans into a completed, effective highway facility.

The contractor, depending upon his ability, working force and equipment, will establish a program schedule which will indicate how and when he plans to take the necessary steps and advance the various stages to complete the project. The methods and means of construction he elects to use, providing they do not violate the contract, terms, the State specifications, and the various State industrial codes and safety statutes are the contractor's prerogative. In the final analysis, the responsibility for successfully completing the highway facility according to the plans and specifications is a joint one, resting equally on the shoulders of both the engineer-in-charge and the contractor. To get the best possible job, the engineer and the contractor must work together and aim for the single common goal. The engineer must appraise and consider in advance of the actual work being performed at the moment. The work planned and the methods to be used next week must already have been discussed and agreements reached between the contractor and the engineer so that both know what work is to be done and the methods to be used to accomplish it. The engineer who waits to see what the contractor is going to do next and how he is going to do it, and then tells the contractor that it is wrong or unacceptable, is not properly carrying out his responsibilities to the State, nor is he advancing the project in a sound manner.

The engineer-in-charge must be careful to exercise a very delicate degree of supervision particularly with respect to the manner in which the work is to be performed. There is a very definite area of contractor prime responsibility and so long as the contract specifications are being followed, he should not reject the contractor's suggested method or means unless, of course, it is clearly unsound or unsafe. Otherwise, he will be assuming a greater responsibility than the contract intends and possible legal liability will result from his actions. The courts in New York recently extended liability to cover consultant engineers employed by the State in a supervisory capacity on the theory that they exceeded their authority and demanded that the contractor apply a particular method of operation which resulted in personal injury to the contractor's employees. In New York, we can expect an increasing number of such suits since in this way the injured employee can avoid being confined to the workmen's compensation injury scale and hope for a trial jury's much more generous award.

It is, therefore, vitally important that the terms "supervision" and "inspection" be clearly itemized and defined in the contract documents so as to preserve the contractor in his proper role as "independent contractor" and his responsibility for the method of operation and limit the supervision and inspection performed by the State as being

solely for the purpose or making certain that the contractor is performing the work within the scope of the contract and contract plans and specifications.

CONCLUSION

Highway contract administration is replete with manifold problems. Obviously all of them cannot be discussed or even touched on in a paper as brief as this. However, I have attempted to present some of the obvious ones. I am heartened by the designation of the newly-created Department of Legal Studies for I believe that this group can undertake a detailed study and review of this very important area and furnish us with a creative, affirmative approach toward effectively meeting a difficult phase of our work.