Bid Preparation

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In order that we may better understand road bidding, the subject I have been assigned, which obviously deals with highways, let's talk for a moment about roads of yesteryears—the first highways of which we have any records. When and where man first began to build roads we do not know, but we do know it was long before authentic history. We know it was necessary to have roads for the building of the pyramids of Egypt and the great walls and hanging gardens of Babylon. Herodotus tells us that a great king of Egypt built a road ten feet in depth across the sands for the transportation of materials for the building of the pyramids, employing one hundred thousand men for a period of ten years. Early history speaks of wonderful roads radiating from Babylon on or before the year 2,000 B.C. These roads extended to Susa, Ecbatana, Sardis, and Ninevah and were paved with brick laid in asphaltum—I repeat, laid in asphaltum.

Then came the Appian Way, or Roman Roads, about 300 B.C. which constituted a network of approximately three hundred sixty miles and was finished by Julius Caesar. These roads had a depth of some three feet and I am sure were let by contract as all roads had a specification to follow.

After the fall of the Roman Empire road building ceased for more than one thousand years, and not until the thirteenth century did they get started in stride, and the construction did not start again in Italy as we might think, but in England and France. England and France not only followed the Roman specs in the construction of roads, but also as to maintenance. England and France were the first to build toll roads, all of which were let by contract.

The early settlers of the United States brought with them, you might say, the blue prints for road building from England. The building of toll roads started in the United States in the eighteenth century. The first toll road in the United States was completed in 1785 between Alexandria, Virginia and Sniggins Gap, Virginia.

With the advent of the railroad, Federal and State aid for highway construction in the United States diminished. The thinking was that the highways would not be needed with the coming of the railroads. Therefore highway construction ceased for a half century in the United States.

Then road building started again in the latter half of the 19th century, not due to the automobile as we may think, but the bicycle, which brought the need for better roads to the attention of the people. Of course soon followed the motor vehicle which has brought us to the present day needs.

I believe road building is here to stay and as the need arises ways and means will be found to support the construction of highways applicable to our times.

ACTUAL PREPARATION OF BIDS

Whoever fills out a bid to bid on a highway project certainly must be a contractor, and a contractor must have the three M’s. This does not mean Minnesota Mining and Minerals, but Money, Machinery and Men. A contractor with a reasonable profit makes a healthier climate for all concerned.
Big preparation is the most important phase of highway construction. If the bid is not right nothing in the job will be right. It is too late then to correct your mistakes. With due respect to the critical path method, here is where you work that out. If you fail in your bid you will surely follow a critical path.

Preparation for bids starts with the receipt of notice by the Department of Highways that certain jobs or projects are to be let at a certain time, usually on a Friday at 10:00 A.M. To properly bid on a specified project, the contractor must upon receipt of proper plans or proposals visit the job site to familiarize himself with the work to be done. He must have a good idea as to how much rock he will encounter in the grading, know types of soil to be moved, know texture of soil for compaction, whether or not material is wet, swampy, high or dry. If borrow is set up for the job and not furnished by the Department of Highways, he must know where this can be obtained, cost of borrow, and length of haul.

Where concrete structures are to be built in connection with the job he must know whether or not ready-mix concrete is available, and the availability of the concrete usually depends on the class of road to be hauled over. He must check roads for weak bridges that would hamper the movement of materials. Size of the structure to be built governs the price to a great extent.

When paving is included on the project the same routine must be followed, the availability of stone, asphalt, cement, and water, depending on the type of pavement specified, and the type of road over which material is to be transported.

The contractor must investigate State laws for any license requirement that would in any way affect his bid, as some states do have such laws.

The Department of Highways, having estimated the cost of the project, shows on the proposal the amount of certified or Cashier's check to be attached to the bid. The check is usually five percent of the estimated cost of the project. Should you be the successful bidder the check will be returned when bids have been checked, bond posted, and contract signed. In the event you are not the low bidder, the check will be returned within a few days.

In filling out the bid, the contractor must bid each item, extending the total. However the unit price governs the bid. It is necessary to specify items to be used where alternate bids are specified.

Before bids can be signed, sealed and delivered to the Department of Highways there are numerous questions to be answered in the mind of the bidder, such as "Am I sure that I have the best price obtainable from all of the material suppliers?" and you do not seal the bid until you are reasonably sure, which in some cases is thirty minutes before time to turn in the bid. Change in prices is usually the reason for changes the Highway Department finds in the proposals.

Preparations of the next bid you make started with the first bid you ever made. For some of us that was some time ago. Since that first bid countless hours have been spent with bookkeepers, superintendents and others putting together past costs and trying to come up with better methods for doing the work. Not only must the contractor know how to do the work but he must have a broad knowledge of the tax structure, should he make a profit.

I am told that some countries in making bid analysis for awards operate quite differently from this country. For instance, if they receive five bids on a project they immediately throw out the high and low bid, and add the three remaining together and divide by three. The contractor having the bid nearest to the average is the successful bidder. This procedure is not the whole answer, but we do believe that a contractor with a reasonable profit is good for the Highway Department and the economy as a whole.