

Editorial

DEPRECIATION.

Depreciation is a term for which there does not appear to be any universally accepted definition, although the importance of depreciation as a factor in the operating costs of any power plant, pumping plant and machinery and in buildings generally has always been recognized.

Is it too much to say that engineers and managers have in the past not recognized this factor sufficiently?

Failure to appreciate the inexorable law that apparatus of all kinds must come to the end of its useful life has resulted in the financing of economically unsound enterprises of all kinds and in the embarrassment of good enterprises through the distribution to stockholders of funds that should have been held in reserve for maintenance.

Difficulties arising from lack of funds with which to provide replacements are often responsible for poor service.

It is obvious that deterioration, visible or invisible, is going on continuously. Engineers, therefore, must not fail to note the distinction between depreciation and maintenance.

The length of useful life of any unit is determined by one or both of two factors: First, the inherent quality of most physical property to deteriorate owing to use and to the elements until it reaches such a condition that it is either impossible to keep it in satisfactory operative condition by repair or the cost for such repairs becomes so great that it would be more economical to replace it by a new one.

Second, the changes in the art whereby the character of the service required is so changed that it becomes obsolete.

The rate to be allowed for depreciation must be largely governed by local conditions and will vary according to the utility. Depreciation is a constant loss and should be reckoned with.

ESTIMATE vs. TENDER ON CIVIC WORK OPEN TO CONTRACT.

The practice of city engineering departments competing with contractors on public works is becoming more general and in a number of ways this is to be welcomed. It serves as a preventative against a possible agreement among contractors in the matter of prices or conditions of work. Another good effect is that it acts as a stimulus to the municipal engineering staff. When the onus is thus placed upon the staff of competing with outside concerns it tends to keep it more efficient and at the same time keeps the price of general construction work more nearly where it ought to be.

On the other hand, in not many cities in Canada is the engineering department so well organized as to be in a position to better carry out such work (with the exception of perhaps extensions to water mains, sewers, pave-

ments, etc.) and at a lower cost than the responsible contractors who bid for it are in a position to do. Questions of plant, labor and experience are usually in favor of the contractor.

This raises the question as to the advisability of getting a tender from the city engineering department on work to which the above conditions apply. If it be the lowest it ought to be accepted under the competitive plan. If, on the other hand, the engineer's tender is to be merely used for the purposes of comparison is not the same object obtained by the submission of an estimate?

It is claimed by many that the municipal engineer has many opportunities for so distributing his charges as to make the ultimate cost of a particular piece of work amount to any figure he desires within reasonable limits.

There would appear to be many pieces of work concerning which an estimate would answer the same purpose as a competitive tender and leave to contractors the tendering for work which they are better equipped to carry out.

This would have the effect, however, of being less beneficial so far as stimulus to the engineering staff is concerned. However, an intelligent combination of the two would add to the efficiency of the city engineer's department without losing the advantage of being able to check contract prices, and without being as unfair to the contractor as engineers' bids occasionally have been.

AIDING THE PROFESSION.

During the past few months the status of the engineering profession has been very frequently discussed in scientific spheres. Not a few papers have been read before various technical societies on the subject and these have brought out much discussion as to how engineering might be aided to come more nearly into its own as a profession.

The engineer is the man who is expected to do things, and in most instances he does not disappoint. The thing accomplished, he is disposed to say little or nothing about it. This trait in him is to be commended, but may not always be the wisest procedure to follow. If this is persisted in it may well be doubted that the general public will ever have clear-cut ideas as to the real importance of the engineer in the community.

The fact that these questions are forcing themselves upon the membership of the profession is in itself a hopeful sign. It does really seem as if the desire to do more in the way of mutual assistance of one another in the engineering profession was gaining ground.

There are wonderful engineering possibilities in Canada and unlimited scope for the engineer. Problems are facing us as a people and will continue to face us in the solution of which the engineering profession will have a large part to play. It is fitting, therefore, that every member of the profession do his share in an effort to assist it to attain that position which it should rightly occupy.