the application of seal coat, though it can decrease the patchwork if the sub-bases are affected by the infiltration of the water.

6. The patchwork of a specification as mentioned above depends on a number of factors and not only on provision of primer coat or soil-cement layer. While comparing the performance of two specifications, all the factors are required to be considered. In this case subgrade has been the influencing factor.

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Plan-Dimensioning of Footings Subjected to Uniaxial Moments*

by

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In proportioning a trapezoidal footing; b, B and L are the three unknowns which should be found ; minimising the area. With a trapezoidal footing normally $e > e_{max}$, and due to separation at the footing-soil contact surface, there is redistribution of pressure. This aspect gives only one relation based on the maximum pressure to be equal to its allowable value. Another relation can be obtained from the aspect of stability against overturning. With two equations and three unknowns, the solution set is uncountably infinite. In such a situation trial and error procedure or arbitrary choice cannot be avoided.

In trapezoidal footings, authors have fixed the value of L, reducing the number of unknowns to two and further, specifying the value of m i.e., ratio of B/b, reduced the number of unknowns to one. In case of the rectangular footing, they reduce the number of unknowns to one by (*i*) either fixing L for restricted dimensions, (*ii*) or fixing the value of n, i.e., the ratio of L/b in case of unrestricted value of L. In case of square footing, of course, the number of unknowns is one. In all the cases, they find only one unknown from the first condition of pressure

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distribution. Could this not be done simply by writing the equation and finding out the only admissible root ? This may be more direct than reading the values of 100 K/n, subsequently checking for p_{max}, and trying an arbitrarily chosen value of 100 K/n, as shown in the illustrative example of square footing. For other footings they have not shown the value of p_{max}. $\triangle W$ depends upon the area of the footing and plan-dimensions also depends upon $\triangle W$. This interdependence requires unavoidable iteration. The authors' curves are very useful to limit the amount of computation, but do not overcome the inherent limitations of judicious choice and iteration.

In the trapezoidal footing, authors have fixed L to have a restricted dimension due to presence of a property line. This is not correct. Column position is fixed by an architect, which fixes up its distance from the property line. Thus "a" is fixed. On the sides other than property line, there is no restriction, thus fixing up L seems to be arbitrary. In case of the presence of another column nearby, a combined footing can be provided. If authors agree that it is "a" not L that is fixed for a given situation, can these curves be used for plan-dimensioning of trapezoidal footings without an additional arbitrary choice of L?

For a rectangular footing, $m=1$, the curve for 100 K/n versus e' is not understandable, because while applying Equation (12) for $e'>1/6$, Equation (15) cannot be used as the denominator is becoming zero. The value of 8·8 shown in the curve for $e'=0{\cdot}2$ is obtained through Equation (9) which is for $e'<e'_{max}$. The authors should have clearly mentioned about the limitations of the use of Equations (12 and 15) for $e'>e'_{max}$ and enlisted separately the relevant relations.

The writers, however, feel that the authors' paper is a significant step forward in the plan-dimensioning of isolated footings subjected to moments.