

The point-objective problem and the Weber problem are two well-known formulations for locating a new facility with respect to a set of fixed facilities. When locations are represented as points on a plane, the point-objective problem is a multiple objective formulation of minimizing the distance from a variable point to each of the fixed points. Similarly, the Weber problem is a single objective formulation of minimizing the sum of transportation costs between the variable point and the fixed points, where transportation cost is a function of distance. Generalizing solution properties for these problems from distance measures given by the Euclidean, rectilinear,  $l_p$ , and one-infinity norms; this paper develops solution properties under the broad classes of distance measures given by block and round norms. For the point-objective problem, we show that (i) the efficient set for all round norms is the convex hull of the set of fixed points and (ii) the efficient set under a block norm tends to the convex hull for a sequence of block norms approaching a round norm. For the Weber problem, we prove that (i) an optimal location for any block norm may be found in a finite set of intersection points belonging to the convex hull and (ii) this set tends to the convex hull for a sequence of block norms approaching a round norm. Finally, we use these results to propose a synthesis of some of the main properties in continuous and network location theory.