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The excavated ruins of the pre-Columbian settlement of Paquimé, the central settlement of the Casas Grandes culture in the North American Southwest exhibits a gridded, planned appearance. This thesis investigates whether that appearance is the product of specialist architects using a formalized unit of measure. Three architectural features of the site are examined via an inductive and deductive method to derive at a statistically significant base unit of measure of approximately 70 cm. Having arrived at this unit, I conclude that the architecture of Paquimé is indeed specialized, reflecting a culture with substantial political complexity.