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The Homogeneous Approximation Property is a key property of Gabor systems which leads to necessary conditions for Gabor frames in terms of the Beurling density of the associated sequence of time-frequency shifts of the generator. We show that, with some restrictions, wavelet frames and wavelet Schauder bases also satisfy an analogue of the Homogeneous Approximation Property with respect to the affine group, and that this leads to necessary conditions for existence in terms of an affine Beurling density. However, in stark contrast to the Gabor case, we show that the density depends on the generator, and there is no Nyquist density. (Received September 17, 2005)