An interesting topic in compressive sensing concerns problems of sensing and recovering signals with sparse representations in a dictionary. In this note, we study conditions of sensing matrices $A$ for the $\ell^1$-synthesis method to accurately recover sparse, or nearly sparse signals in a given dictionary $D$. In particular, we propose a dictionary based null space property ($D$-NSP) which, to the best of our knowledge, is the first sufficient and necessary condition for the success of the $\ell^1$ recovery. This new property is then utilized to detect some of those dictionaries whose sparse families cannot be compressed universally. Moreover, when the dictionary is full spark, we show that $AD$ being NSP, which is well-known to be only sufficient for stable recovery via $\ell^1$-synthesis method, is indeed necessary as well. This is a joint work with Haichao Wang and Rongrong Wang.