1014-13-1499 **Evan Houston** (eghousto@email.uncc.edu), Dept. of Mathematics, UNC Charlotte, Charlotte, NC 28223, and **John R Taylor*** (jrtaylor@uncc.edu), Dept. of Mathematics, UNC Charlotte, Charlotte, NC 28223. *Arithmetic Properties of Pullbacks II.* Preliminary report.

We study properties of (fairly) general pullback diagrams. Let D and T be domains, let I be an ideal of T, let $\varphi : T \to T/I = E$ be the canonical map, and let $R = \varphi^{-1}(D)$. One of our main results describes when R is a Prüfer v-multiplication domain under a mild additional hypothesis on I. To state the result, we need a variation of the t-operation. For domains $D \subseteq E$ and a nonzero ideal A of D, set $A_{\widetilde{v}} = (D :_E (D :_E A))$ and $A_{\widetilde{t}} = \bigcup B_{\widetilde{v}}$, where the union is taken over all finitely generated subideals B of A. The $\widetilde{v}$- and $\widetilde{t}$-operations have many of the properties of a star operation. We say that D is a *Prüfer v-multiplication domain with respect to E* (an E-PVMD) if each nonzero ideal A of D satisfies $(AA^{-1})_{\widetilde{t}} = D$. Under the assumption that I is a maximal t-ideal of T, we prove that R is a PVMD if and only if T is a PVMD, D and E have the same quotient field, and D is an E-PVMD. We also give several consequences of this. (Received September 28, 2005)