Extensions of domination in graphs includes restrained domination, as introduced by Domke, Hattingh, Hedetniemi, Laskar and Markus in the 1990s. Let $G = (V, E)$ be a graph with vertex set $V$ and edge set $E$. A set $S \subseteq V$ is a restrained dominating set if every vertex in $V - S$ is adjacent to a vertex in $S$ and another vertex in $V - S$. The cardinality of a minimum restrained dominating set is the restrained domination number, denoted $\gamma_r(G)$. Here, we give initial results of the directed graph extension based upon this concept, the directed restrained dominating set of a digraph $D = (V, A)$. Further, the structure of an underlying graph whose orientation can give a minimum restrained domination set is discussed, with a labeling algorithm provided for complete bipartite underlying graphs and extended to complete $t$-partite underlying graphs. (Received September 26, 2017)