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**Rachelle Bouchat\*** (rbouchat@iup.edu), 210 South Tenth Street, Department of Mathematics, Straight Hall, Room 208, Indiana, PA 15701, and **Tricia Brown**. *Minimal Free Resolutions of Path Ideals of Rooted Trees*. Preliminary report.

Given a rooted tree graph, we consider the path ideals associated to the graph. We will describe the multi-graded Betti numbers of certain classes of path ideals of rooted trees using collections of subtrees and subforests based on the degree of the vertices relative to their level in the rooted tree. Additionally, a constructive approach for building trees will be presented, where the building operations' effect on the projective dimension of the associated path ideal will be detailed. (Received August 10, 2015)