Discrete mathematics offers a wide variety of contemporary contexts useful for college preparation of secondary students when seen through the lens of the standards for mathematical practice. In this session, we report on early results of a project bringing pedagogically sensitive mathematicians and math educators together with local high school teachers to redesign the curriculum of a high school course whose goals are stated in terms of BOTH content and standards for mathematical practice (SMPs) with an eye on a sophomore level undergraduate discrete mathematics. This session will focus on a description of our unit on graph theory, including a description of the targeted SMPs, a description of pedagogical principles guiding our approach and examples of students’ (and in-service teachers’) demonstrated ways of understand and ways of thinking. This work can help undergraduate level discrete mathematics instruction by shedding light on the kinds of difficulties undergraduate students may experience, together with their sources, and by providing feedback on what undergraduates have internalized when they become teachers. (Received September 26, 2017)