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Pye Phyo Aung*, pye.aung@ndsu.edu. *Amalgamated Duplication, Pseudocanonical Covers, and Gorenstein Homological Algebra*. Preliminary report.

When E is a semidualizing module over a commutative ring, Holm and Jørgensen studied some connections between E -Gorenstein injectivity/projectivity and Nagata's trivial extension. We generalized some of those results to other general constructions including D'Anna and Fontana's amalgamated duplication of a ring along an ideal and Enescu's pseudocanonical covers. We also identified some key properties of those general constructions that enable their connections to Gorenstein injectivity and projectivity. (Received July 22, 2013)