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Bartnik data are a Riemannian 2-sphere of positive Gaussian curvature equipped with a non-negative function H to be thought of as its mean curvature in an ambient Riemannian 3-manifold. Mantoulidis and Schoen suggested a construction of asymptotically flat Riemannian 3-manifolds of non-negative scalar curvature which allow to isometrically embed given Bartnik data of vanishing mean curvature, i.e. $H=0$. They use their construction to explore — and disprove — stability of the Riemannian Penrose inequality. We adapt their construction to constant mean curvature (CMC) Bartnik data, i.e. $H=\text{const.}>0$. Moreover, we construct asymptotically hyperbolic extensions for minimal and CMC Bartnik data. I will present the constructions as well as the motivation for such constructions which is related to Bartnik's quasi-local mass functional and its minimizing properties. (Received September 25, 2017)