

Design for Future Transit Rail Maximizes Benefits from Initial Investment for the Gov. Mario M. Cuomo Bridge

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1 Abstract

The new Governor Mario M. Cuomo Bridge spans the Hudson River between Rockland and Westchester Counties in southern New York. A key design criterion was to accommodate various modes of transportation in the future. This paper discusses how the bridges will accommodate dedicated bus rapid transit lanes as well as the potential future construction of a transit bridge between the structures without installing additional foundations in the river. The transit bridge would require significant rail construction on either side of the river to provide viable connections to existing rail lines, making it prohibitively expensive. The transit bridge will fit between the two highway bridges and carry two rail lines. We will explain how the highway bridges will accommodate the future rail bridge without providing needless excess capacity into the piers and foundations built under this design-build contract.

Keywords: Pratt truss, cable-stayed bridge, parallel strand cables, parallel wire cables, direct fixation, continuous welded rail, guard rails.