



11. Eisenhower Avenue Station, Alexandria (Virginia, USA)

Owner: Washington Metrop. Area Transit Auth.
General Architectural Consultant:
Harry Weese & Associates
General Engineering Consultant:
De Leuw Cather & Company
Section Design Engineer/Architect:
Howard Needles Tammen & Bergendoff
Contractor: Ohio Valley Constr. Co., Inc.
Work Duration: 40 months
Service Date: 1982

Radiating from the Nation's Capital District to the surrounding suburbs, the Washington Metro when completed will comprise 162 km of underground, at-grade and aerial tracks. The desire that the Metro stations harmonize with the architecture of the Capital resulted in an arched vault design for all underground stations, and maintained this theme with a gull wing canopy design for elevated stations.

The elevated Eisenhower Avenue Station in the City of Alexandria has 183 m-long side platforms. Aerial tracks through and adjacent to the station are connected to reinforced concrete slabs which act compositely under live load with single-cell structural steel boxes to form the two supporting longitudinal track girders. The steel boxes have vertical webs and are composed mainly of ASTM A588 low-alloy steel with a minimum tensile strength of 480 N/mm². The 4.1 m wide side platforms are the paved top surfaces of longitudinal prestressed concrete tee-shaped girders. The track girders and the platform girders span between piers consisting of transverse prestressed concrete cap beams supported by cylindrical reinforced concrete columns. Part of the station has two tiers of cylindrical shell canopies. Through the canopy covered length of the station, the piers are spaced 15.2 m center to center, and beyond the covered length, the spacing is increased to 25.4 m. The transverse spacing between the cylindrical columns is 9.1 m. Four canopy configurations are used. Typically, the platforms are covered by single-cantilevered can-

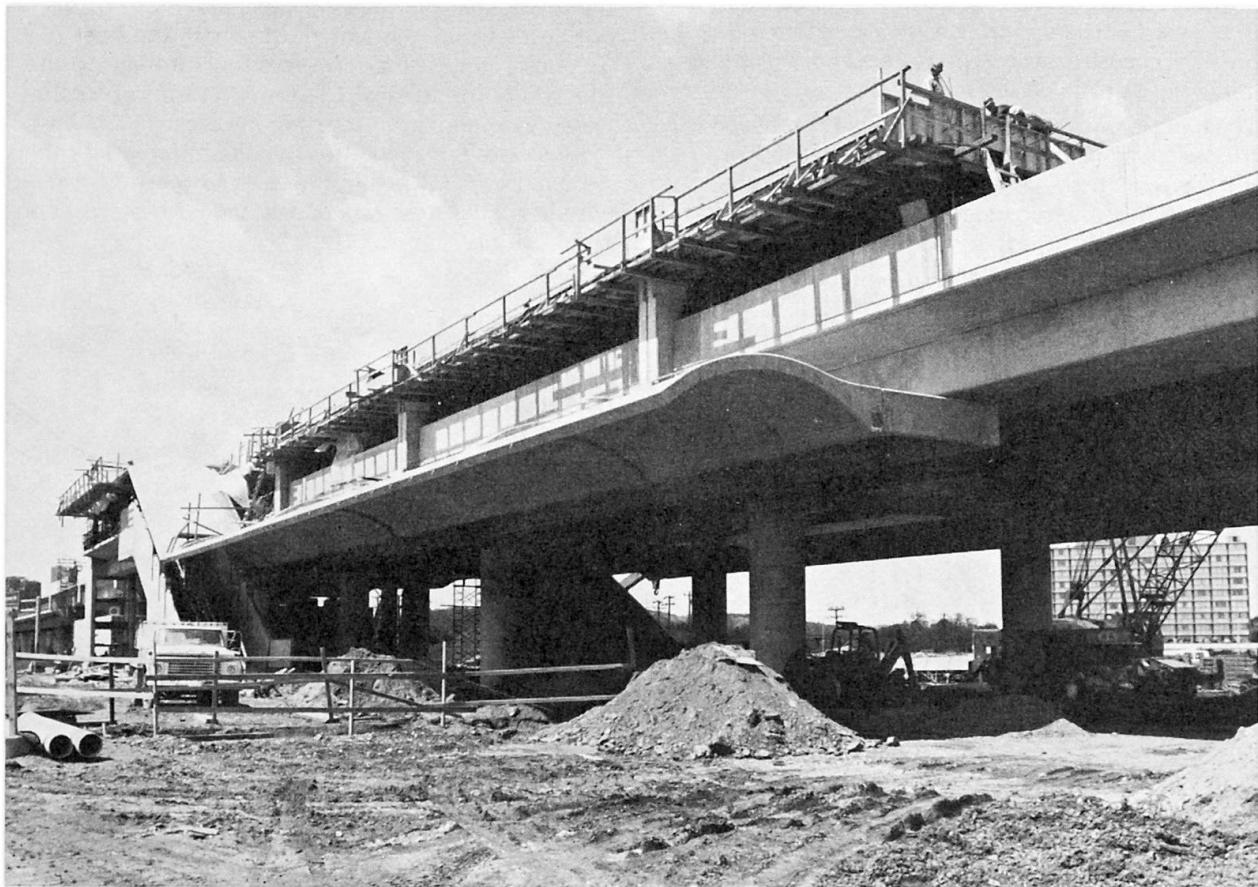


Fig. 1 Elevated station during construction

