

EXECUTIVE SUMMARY

Widening of the Pennsylvania Turnpike, MP A20 – MP A26
Category H: Transportation

Urban Engineers was engaged to design the widening of the Pennsylvania Turnpike, from two travel lanes in each direction, to three travel lanes in each direction, between Milepost A20 and Milepost A26 in Montgomery County, PA. One of the nation's oldest limited access highways, the Turnpike right-of-way was largely established in the 1940s and 1950s. The challenge of incorporating 21st century highway and stormwater management designs into a limited right-of-way and minimizing the impacts to adjacent residential and commercial properties was a key controlling aspect in the design.

In addition to the roadway, many other elements of engineering practices had to fit within the limited available "bandwidth". These included, but were not limited to, the embankment or cut slopes needed to support and accommodate the roadway widening as well as permanent roadway drainage features, stormwater management facilities, and E&S features to control surface water runoff and minimize the sediments and pollutants leaving the project site.

To limit land acquisition, retaining walls were designed to contain the fills and cuts to the extent possible. Urban worked closely with the Pennsylvania Turnpike Commission, state and local officials, the Montgomery County Conservation District, the local Townships and the Pennsylvania Department of Environmental Protection to develop the overall roadway and stormwater management system. Satisfying the requirements for controlling surface water runoff from the site during and after construction, while minimizing impacts to the residents, was critical in allowing the project to move forward.