EXECUTIVE SUMMARY

When inspections identified deteriorating fascia beams on the Mars Road bridge, the Pennsylvania Department of Transportation asked KCI to develop emergency replacement plans. Located in an overly-congested area, the existing structure carried approximately 16,000 vehicles per day. To alleviate this congestion, the project quickly grew past a simple bridge replacement to include reconstruction and widening of the nearby roadway and intersection. To replace this bridge while being compatible with the widening, the project also included the extension of the arch culvert carrying Breakneck Creek and more than one mile of roadway reconstruction, including the signalized intersection with SR 3015, Mars/Valencia Road.

The widening of SR 0228 greatly improves efficiency through the intersection as well as assists in traffic flow up the profile grades. The widening also allowed for phased construction of the bridge, which reduced impacts to traffic. The two phases of construction added an aspect of complexity to the already complicated issues associated with constructing a two-span continuous bridge that required splices.

Overall, the project scope grew due to the conscious effort of placing the needs of the stakeholders in the corridor and motorists at the forefront. By utilizing a big picture approach to transportation infrastructure, what could have been a simple bridge replacement became a segment of a larger corridor improvement in an effort to reduce traffic congestion and improve safety and roadway capacity for years to come.