EUCLID CHEMICAL

PROJECT PROFILE

JOHNSON COUNTY GATEWAY INTERCHANGE

PROJECT DATA

Location – Johnson County, KS

Application – Paving

Architect/Engineer – Design Build Kiewitt

General Contractor – Clarkson Construction/Kiewitt

Concrete Producer – Clarkson Construction & Fordyce Concrete

Total Area – Approx. 745,000 yds² (623,000 m²)

PRODUCTS FEATURED

PLASTOL™ 6420
Mid-Range / High Range Water Reducing Admixture

EUCON™ WR91
Normal Range Water Reducing, Set Retarding Admixture

EUCON™ AEA-92 / AEA-92S
Air Entraining Admixture

SCOPE OF PROJECT

- 30,000 ft² of noise walls
- 72,000 linear feet of concrete pipe
- 690,000 yd² of cement treated base
- 745,000 yd² of new concrete pavement
- 27 bridges totaling 146,000 ft² of bridge deck
- Drainage improvements of 5,000 linear feet of precast concrete box culverts

PROJECT SUMMARY

Specified at 4,000 psi with a 25-year service life for concrete pavement and 30 years for bridge decks, the Johnson County Gateway project was planned by the Kansas Department of Transportation (KDOT) to help improve the safety and effectiveness of Kansas State Highway 10, Interstate 35 and Interstate 435. The interchange is vital for local and regional traffic where accidents and traffic jams were becoming an issue for drivers due to increasing traffic volume. With concrete having better durability and less maintenance compared to asphalt, the project will provide all drivers with better efficiency and easier access on and off the interchange by greatly reducing traffic congestion and having fewer closures for repairs.

With an annual average daily traffic (AADT) of over 230,000 vehicles that is expected to increase to around 400,000 by 2040, Euclid Chemical's admixtures (featured above) and technical support allowed this extensive project to be completed on time with the desired placement characteristics for lasting, durable concrete. The use of PLASTOL 6420, along with maturity method testing, showed the chosen concrete mixture could achieve the specified 450 psi flexural strength for traffic at 36 hours. The completion of this project will ensure safe and efficient travel to local areas of development for years to come.