



## PROJECT PROFILE

# ODOT US23 BRIDGE DECK APPROACH SLAB



### PROJECT DATA

**Location** – Sylvania, OH

**Application** – FRC Bridge Deck Approach Slabs

**Architect/Engineer** – Ohio Department of Transportation (ODOT)

**General Contractor** – Miller Bros. Construction

**Concrete Producer** – All-Ohio Concrete

### PRODUCTS FEATURED

**TUF-STRAND™ SF**

Macro-Synthetic Fiber

### SCOPE OF PROJECT

Replace and rebuild the concrete approach slabs to the OH US23 NB bridge using fibers to improve durability and longevity of concrete.



### PROJECT SUMMARY

In 2018, the Ohio Department of Transportation (ODOT) completed a rehabilitation project on the northbound lanes of the approach slabs to the US23 bridge over the Ottawa River in Sylvania, OH. Requiring a quick turn-around time on construction of the heavily travelled roadway, ODOT engineers turned to the use of fiber-reinforced concrete and lightweight fine aggregate to promote internal curing. The use of TUF-STRAND SF at 4 lb/yd<sup>3</sup> (2.4 kg/m<sup>3</sup>) was used to reduce potential cracking and improve service life. The concrete mix also incorporated a 600 psi (4 MPa) flexural strength design requirement that was needed to be achieved in 36 hours with an ultimate compressive strength of 4500 psi (31 MPa) in 28 days. The total construction turnaround time was 4 days and to date, no visible cracks are present on the surface. ODOT is continuously monitoring this project and now discussing the use of fibers for future repair work with performance based specifications utilizing fibers for concrete reinforcement.