



Hampton Roads Bridge - Tunnel Expansion Project

Structural Deformation Baseline Monitoring using AMTS and High-precision Low-cost GNSS

Transforming your infrastructure into living assets



4DBloc - GNSS sensor installed on site



Cyclops - AMTS installed on site

Engineering Services

Monitoring Services

Platform Solutions

Mapping Services

Major infrastructure development project

The \$3.8 billion Hampton Roads-Bridge Expansion project is the biggest project in the Virginia Department of Transportation history which includes constructing twin bored tunnels west of the existing immersed-tube tunnel and bridge.

SIXENSE was chosen by the design-build team Hampton Roads Connector Partners (HRCP, consists of Dragados USA, Flatiron Construction, VINCI Construction Grands Projects and Dodin Campenon Bernard) to perform the baseline deformation monitoring of the existing tunnels, approach walls as well as several buildings on the south and the north islands from August 2019 to June 2020.

Combined monitoring solutions

A robust near real-time deformation monitoring system was designed and implemented using 9 SIXENSE Cyclops automatic motorized total station (AMTS) systems, complemented by nearly 50 novel 4Dblocs high-precision GNSS receivers and over 60 wireless tiltmeters.

In recognition of the high quality work performed by SIXENSE during the baseline monitoring, a new contract for monitoring during active construction was recently awarded to SIXENSE in August 2020 with an expanded scope of monitoring work including nearly 40 more 4Dbloc GNSS receivers, several Cyclops systems and various type of geotechnical and structural instruments.



Norfolk USA



Started in 2020
31 months



Virginia Department of Transportation
Hampton Roads Connector Partners (HRCP)

Key figures

9
Cyclops

50
4DBloc - GNSS sensors

60
Wireless tiltmeters

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