Have any questions?
01342 719 362

Project Report

CONSULTANT/ENGINEER:
TRU East

CLIENT
Network Rail

OTHER PARTNERS
Scott Parnell

CONTRACTOR
J Murphy & Sons Ltd

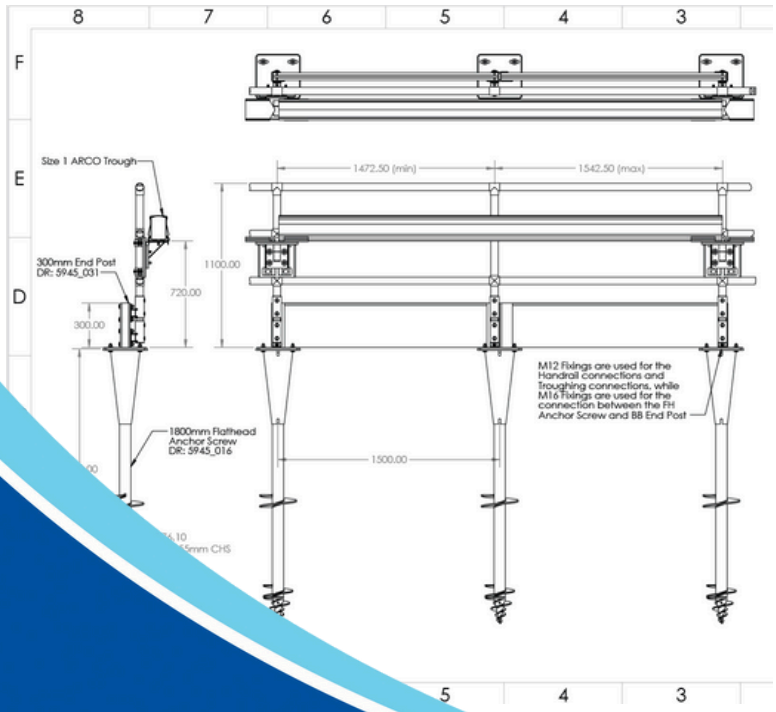
INSTALLER
J Murphy & Sons Ltd

Issue

The Castleford section of the Transpennine Route Upgrade (TRU) required a durable, lightweight cable troughing system that could be installed efficiently on a steep embankment near the River Aire. Traditional concrete foundations were impractical due to installation time, environmental impact, and accessibility constraints. A sustainable solution was needed to reduce disruption and carbon emissions while ensuring long-term structural reliability.

Testing

To ensure the feasibility of the proposed solution, extensive material assessments and system trials were conducted. The ARCOSYSTEM®, made from pultruded glass fibre reinforced polymers (GRP), underwent durability and environmental testing to verify its resistance to extreme weather conditions, from -40˚C to +80˚C. The screw pile anchoring system, supplied by Anchor Systems, was evaluated for load-bearing capabilities and stability, particularly on uneven terrain. The testing phase confirmed that this combination would offer enhanced flexibility, reduced installation time, and superior longevity compared to traditional alternatives.



Solution

The Rapid Route ARCOSYSTEM® installation was successfully implemented, utilising Anchor Systems' screw piles to eliminate the need for traditional concrete foundations. The elevated ARCOSYSTEM® cable containment system, supported on posts spaced up to six metres apart, significantly streamlined installation. The system's bespoke steel bracketry provided adjustable height and directional flexibility, ensuring smooth navigation along the embankment. This solution not only optimised installation efficiency but also contributed to reducing carbon emissions by minimising material waste and site intervention.

Castleford TRU

Rapid Route ARCOSYSTEM® Installation

Result

The 1,000-metre installation was completed on time with minimal disruption. The lightweight and adaptable system significantly cut down installation hours and carbon footprint, receiving positive feedback from J Murphy & Sons Ltd. By integrating innovative materials and efficient anchoring, the project successfully met all structural, environmental, and operational objectives, reinforcing Anchor Systems' commitment to sustainable railway solutions.