



**IRISH STEEL**  
**AWARDS 2025**

in association with

**RFL**  
STEELS LIMITED

**Shortlisted Finalist | Voting ID: #6604**

Finished Projects

Constructional Steelwork – Civil Works

**Murphy International**

M62 Motorway Bridge Replacement, UK







Voting ID: #6604 | Constructional Steelwork – Civil Works



## M62 Motorway Bridge Replacement, UK

### Project Story:

Murphy delivered this critical Network Rail project to replace a 1969 post-tensioned concrete bridge that had reached end-of-life. Located between M62 Junctions 19–20—a vital freight route serving Drax Power Station—the project required replacing the structure while managing 120,000 daily vehicle movements.

Appointed as Principal Contractor in September 2023, Murphy demolished the original bridge and installed a new 42m x 9m steel structure within 12 months. The project required the M62's first-ever full closures since opening, including two 57-hour closures.

The bridge was fabricated at Murphy's Irish facility using S355K2W weathering steel for durability. A complete Tekla digital model enabled real-time design collaboration with Network Rail. The deck was pre-assembled 500m from site, including waterproofing and walkways, then transported on 5-axle bogies.

Murphy developed an innovative pre-assembly methodology to ensure precise installation. The oversized bridge was adjusted during installation using PTFE-bearing trestles and Self-Propelled Modular Transporters, achieving millimetre accuracy. Bearing pockets were cast using laser survey data from trial assembly, eliminating post-installation rework.

Sustainability measures included weathering steel, warm mix asphalt, and GRP walkways instead of steel, reducing embodied carbon by 28 tonnes. Reusing existing piers and abutments saved 347m<sup>3</sup> of concrete.



The project achieved 59,000 work hours with zero safety incidents, meeting all quality standards (Execution Class 3, 1,500 steel plates fabricated using 9,750kg of weld wire, zero weld defects) and completing on schedule. Real-time concrete maturity testing accelerated progress.

This project sets a benchmark for collaborative infrastructure delivery, combining off-site manufacturing, sustainable materials, digital coordination, and precision installation for a nationally significant transport asset.

### Project Team:

**Client** - Network Rail

**Design** - Network Rail

**Contractor** - Murphy



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## M62 Motorway Bridge Replacement, UK

### The Nominee thinks this deserves to win an award because:

The MVN2/48A M62 Bridge Replacement exemplifies exceptional collaborative delivery. In just 12 months, this project progressed from preliminary design to full installation over one of the UK's busiest motorways—requiring perfect execution throughout. The 42-metre structure, comprising 70-tonne girders, demanded complete off-site assembly and millimetre-accurate installation during live motorway possessions. Every decision had to be right first time.

Success stemmed from genuine collaboration between Murphy and Network Rail. Early Contractor Involvement enabled shared problem-solving and rapid decision-making, allowing concurrent design, approvals, and fabrication despite minimal programme float. Murphy's teams—design, detailing, fabrication, construction—operated as one unit. Fabrication was critical path from day one, with meticulous planning of weld sequences and tolerances to eliminate rework.

Collaboration extended throughout delivery. Transporting 70-tonne girders from Ireland required precise coordination with National Highways, haulage specialists, and authorities. Self-Propelled Modular Transporters enabled seamless handover between teams. Digital coordination through Tekla proved essential. Real-time design reviews allowed fabrication to proceed with confidence, preventing delays and clashes.

Results were exceptional: ahead-of-schedule completion, zero incidents, no tolerance breaches. Reusing substructures avoided demolishing 300+ cubic metres of concrete. Network Rail called this their best regional bridge project in over a decade—not just for scale and complexity, but for exemplary teamwork. The MVN2/48A showcases Irish steel fabrication at its finest: technical excellence, shared ownership, and unwavering commitment from concept to completion.

This project represents what makes Irish steelwork exceptional—delivering nationally critical infrastructure through collaboration, innovation, and flawless execution.

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