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Full Access to Gloucestershire Marina is Restored with Modular Bridge from Acrow

Rapidly installed steel structure is a permanent, durable upgrade for an ageing bailey bridge

Nestled on the River Avon, Tewkesbury Marina is a busy facility with over 300 moorings available year-round for residency or leisure adventure. For many years, a reliable Bailey Bridge provided access to the permanent residential moorings, office block, and refuse collection area. Over the years, however, the condition of the bridge declined, and its weight limit was downgraded to 5 tonnes, which meant it could no longer support large service trucks and emergency vehicles.

The marina selected a like-for-like replacement for the old bridge to streamline the planning, approval and permitting processes, which would have been more complicated if a different bridge type had been specified. In addition, another modular structure would minimise the need for extensive abutment work and allow for the potential reuse of bearing positions. This rapidly installed option also limited the time motorists would be restricted from accessing the marina during construction.

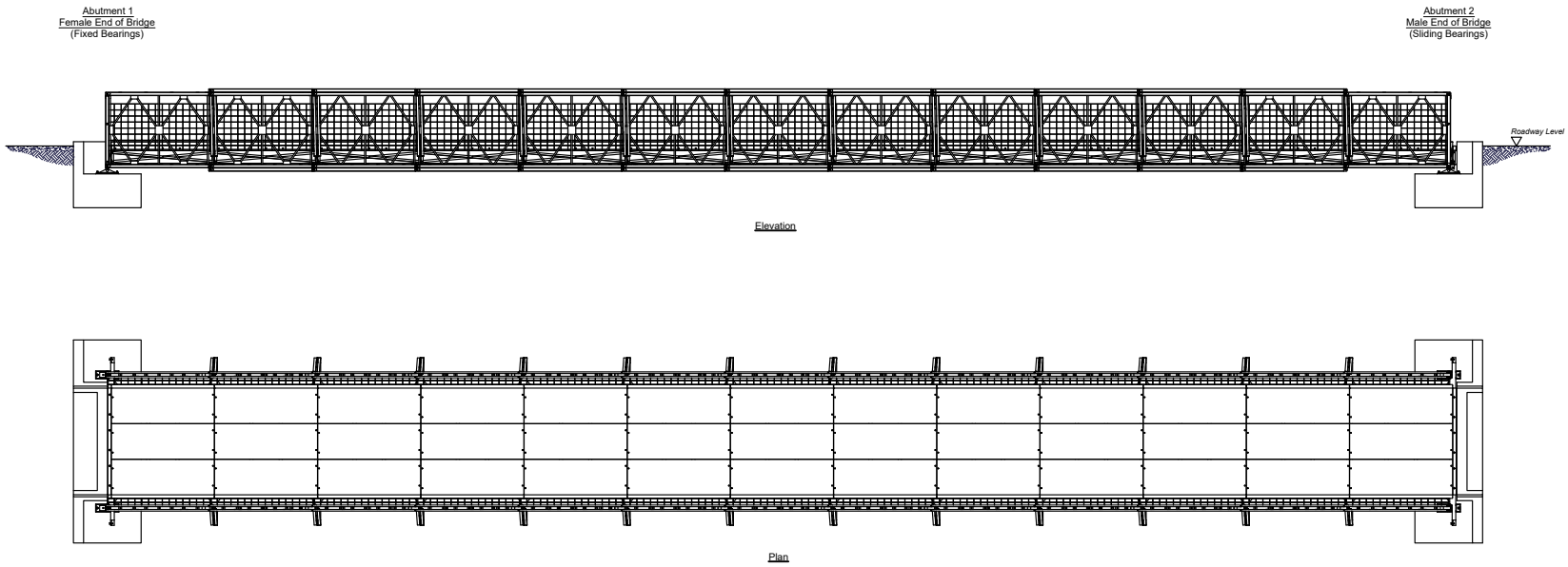
Acrow's team designed the bridge, provided temporary works coordination and supplied a full installation team, which included steel erectors and a site supervisor. The single-lane bridge measures 39.62 metres long and 3.15 metres wide and was designed for 44t vehicles in accordance with CS454. The structure has a durbar steel plate deck and is fully hot-dip zinc galvanised to protect against corrosion.

To reduce disruption for residents, pre-assembly of the new bridge took place at a boat storage yard while the old bridge remained in service, after which, the old bridge was removed and the new structure lifted into place. Both removal and installation were carried out in a single operation lasting just two hours with the new bridge opening to traffic immediately afterwards.

Acrow's easily assembled and rapidly installed modular bridge proved the perfect solution for this project, which required minimal disruption for the local community. With a service life of over 100 years, the durable new permanent bridge will continue to serve the community for decades to come.

acrow.com
acrowuk@acrow.com
+44 1291 623801

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Specifications

Bridge length:

39.62m

Roadway width:

3.15m

Parapets:

Mesh panels

Deck surface:

Durbar steel plate

Bridge erection method:

Crane lift in

Design load:

44t vehicles in accordance with CS454

Mabey C200® bridge finish:

- All major components galvanized to BS EN ISO 14713 and BS EN ISO 1461
- All bolts are spun galvanized to BS EN 1461
- All pins are electro-plated in accordance with BS EN ISO 2081

Mabey C200® bridge specification:

(A) Panel components to BS EN 10025 Grade S450J0 and Grade S355J2

(B) Transoms to BS EN 10025 Grade S460M or Grade S355J2

(C) Deck components to BS EN 10025 Grade S355JR and BS EN 10149 Grade S460MC

(D) Ancillaries to BS EN 10025 Grade S275JR minimum

(E) Panel pins to BS970 Grade 709M40 or 708M40

(F) Bolts to BS 3692, BS14399, DIN 912, DIN 267, DIN 931, BS1083, EN8, EN3, EN15 and ISO898

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