Project Name: Inghey River Aire Bridge

Client: North Yorkshire County Council

Value: £220,000

Date: Oct 2018 to Nov 2018

Hinko Construction Were Awarded this scheme based in Skipton in August 2018 by North Yorkshire County Council

The scope of the project comprised of the following:

- Traffic Management & Associated Diversions
- Kerb Removal and Re-instatement
- Waterproofing to Bridge Deck
- Installation of Bridge Deck Drainage
- Replacement of Bridge Joints
- Blasting and Painting of Bearings & localised sections of Bridge Beams
- Concrete abutment repairs
- Parapet remedial works inc replacement of old Parapet Mesh
- Surfacing
- Road Markings and associated stud works

The "key scheme components" of the scheme comprise:

Closing of the A6069 road junction to the A59 was required to ensure safe working practices. This required substantial traffic diversions to be established directing traffic away from this busy junction and advance warnings to highlight the proposed works to local residents and daily commuters.

Due to the nature of the works and the requirement to maintain traffic flows on the A59, works had to be undertaken utilising 2way traffic signals which were manually operated between the hours of 7am & 7pm.

Meeting programme deadlines were essential to ensure proposed traffic switches and key surfacing works could be achieved and minimal disruption was caused to the public

The initial works focused on traffic management establishment and cold milling of the existing surfacing to expose the bridge deck for preparation works for new waterproofing.

Phasing of the planing works and surfacing was planned to minimise visit charges, traffic management switches and maximise outputs to meet key dates within the construction programme.

Upon completion of the cold milling deck preparation commenced removing the old waterproofing system to allow fine milling and captive blasting works in lieu of Spray Applied Waterproofing being applied.

Several locations of damaged bridge deck were highlighted and associated repairs were made. Following on from this, known services were lifted from the Verge to allow full coverage of the waterproofing system.

Concrete repairs were required at the location of the existing joint, these became evident post removal, shuttering was installed and subsequent repairs were undertaken using rapid setting mortar, this allowed minimal delays to stage one of the waterproofing system application.

Waterproofing works commenced and all area of stage one was completed on programme. This allowed for installation of the new Kerb Line and No-Fines concrete verge infill.

Parapet mesh was removed and replaced prior to stage 1 surfacing works. This was to ensure minimal disruption to the surfacing operations. The contracted stated any defective areas of grout on the parapet posts should be removed and replaced. This was completed in a timely manner prior to the replacement mesh being fitted.

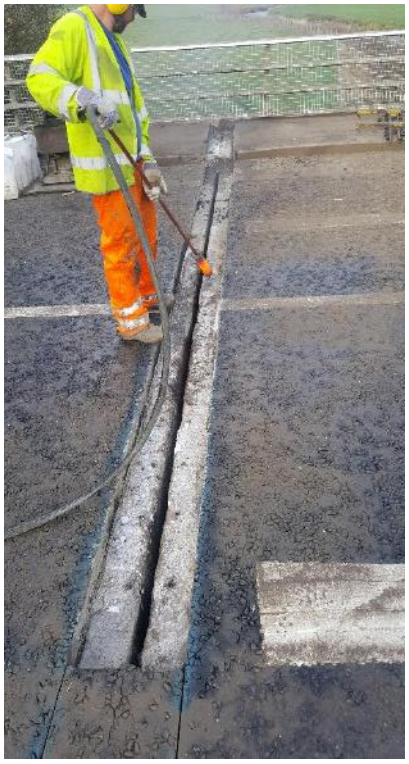
Surfacing was undertaken in 4 stages. Stage 1 was binder course on the South side of the scheme with well established ramps to transition traffic safely between new and existing levels. Upon completion of stage 1, traffic management was switched, opening the South Side of the scheme to the general public allowing the same processes to be undertaken on the North carriageway.

Bridge deck drainage was installed in 2 halves prior to surfacing taking place.

Once all contracted works on the North Side of the Bridge was completed, including cold milling, the second visit for the spray applied waterproofing works, Parapet mesh replacement, kerb installation and concrete verge infill, stage 2 of the surfacing was able to take place. This was to complete all binder course on the project. Surfacing was completed on time. Following on from this, Stage 3 of the surfacing was able to commence. Stage 3 would see all the surface course being completed within a single shift. There was a requirement to allow surfacing to cool prior to allowing it to be trafficked, but with the appropriate supervision and adequate resources available, traffic was switched over mid shift and all surfacing was completed on the carriageway.

The following day, a single surfacing gang was employed to hand lay the footpaths to the client's specification. This was completed with a single TM switch mid shift to allow safe working room. The work was completed on time to a high standard.

A single lane closure was left in place to allow road marking and stud work to be undertaken a side at a time.



Over a single weekend, both nosing joints on the bridge were installed to the required specification. The joints were installed in 2 halves, 2No gangs working on each end of the bridge concurrently. When the first half was completed, a TM switch was implemented and the process repeated until both joints were fully installed.

Traffic management was lifted early Monday morning and the project was completed on time and opened to the public.

During the duration of works on the top of the deck, several areas of work were taking place underneath. This included establishment of encapsulated scaffold access to gain a safe working area to undertake open blasting of the bridge bearings to a S2.5 finish to allow them to be painted in a 3coat protective paint system.

All paintwork was removed from each bearing on both bearing shelves and a 3-coat paint system applied over the following 4days.

In addition, areas of defective concrete were highlighted on the bearing shelf which required to be removed and any defective areas of steel reinforcement removed and replaced with new. Each area was carefully broken out to an agreed point with the client and primed accordingly to be repaired.

When all concreting works had been completed, the access scaffold was removed and the entire area pressure washed to clean the bearing shelf of any debris.

The works were completed on safely on time and budget to our client's satisfaction.