



8104 Bridge Slab Crossings

REVISION 02/06/2024

8104.1 Introduction

This supplementary specification refers to the supply and installation of bridge slabs to gutter crossings.

8104.1 Definitions of terms

This section describes any term which are specific to this specification or requires clarification due to an ambiguous understanding.

Term	Definition
Bridge Slab Crossing	Concrete access constructed over the kerb (bridging) rather than an invert access due to existing crossfalls or grades on road pavement.

8104.2 Referenced Documents

This supplementary specification shall be read in conjunction with the following:

- MRS01 *“Introduction to Specifications”*;
- MRTS01 *“Introduction to Technical Specifications”*;
- MRS 70 and MRTS70 *“Concrete”*
- MRS71 and MRTS71 *“Reinforcing Steel”*
- MRS04 and MRTS04 *“General Earthworks”*
- MRS05 and MRTS05 *“Unbound Pavements”*
- MRS30 and MRTS30 *“Asphalt Pavements”*
- MRC Supplementary Specification 8407 *“Bituminous Cold Mix”*
- Mackay Regional Council Policy COU024 – Driveways and property Accesses Crossing Road reserves
- Mackay Regional Council’s Standard Drawing A4-00044; and
- the Project Drawings and Specifications

8104.3 Description of Work Items

Work items incorporated by this supplementary specification are identified in Section 8104.6 and 8104.7 with individual activities/tasks for measurement and payment sourced from the Bill of Quantities and listed in MRC Supplementary Specification Annexure 8104_1 Bridge Slab Crossings Section 1



8104.4 Quality Systems Requirements

8104.4.1 Std Test Methods (Testing Regime)

The following minimum testing regime applies to this specification:

Civil works activities associated with the installation of a Bridge Slab crossing shall be tested as per the relevant MRTS specification MRTS04, MRTS05, MRTS30, and MRTS70 unless otherwise approved by the Superintendent.

8104.4.2 Hold Points, Witness Points and Milestones

The following table represents the minimum inspection requirements for this specification;

Activity	Inspection Type	When
Construction Procedure and other preliminary documentation as required by Clause 8115.5	Milestone	4 weeks prior to works commencing
Inspection of delivered items	Hold Point	At delivery time for each item.
Prepour inspection of formwork and reinforcing for concrete bridge slabs	Hold Point	Prior to pouring concrete
Curing of concrete slab to occur immediately after pouring	Witness Point	Immediately after pouring for 7 days
Stripping of formwork to slabs approval	Hold Point	No earlier than 72 hours after concrete pour finish, approval by Superintendent
Loading and delivery of concrete bridge slabs	Hold Point	No earlier than 7 days after concrete pour
Excavation of material (Unsuitable)	Hold Point	At time of prepour inspection for supports
Prepour inspection of formwork and reinforcing for concrete bridge slab supports	Hold Point	Prior to pouring concrete
Curing of concrete supports to occur immediately after pouring	Witness Point	Immediately after pouring for 7 days
Stripping of formwork to supports approval	Hold Point	No earlier than 72 hours after concrete pour finish, approval by Superintendent
Placement and laying of slabs on supports	Hold Point	No earlier than 7 days after concrete pour of supports
Construction of roadway approaches to crossing and along pavement	Witness Point	During reinstatement of pavement
Practical Completion works acceptance	Hold Point	At the completion of all works and site has been cleaned and returned to pre-construction state.
Works as Executed documentation	Hold Point	4 weeks prior to practical completion being requested.



8104.4.3 Construction Tolerances

Unless otherwise approved by the Superintendent the following construction tolerances shall apply as to this Specification;

The construction activity outcome shall not depart from the widths, lengths, heights, and shapes specified by the relevant specifications as applies to this specification;

- Concrete tolerances in accordance with MRTS70 Concrete.
- Earthworks tolerances in accordance with MRTS04 General Earthworks.
- Pavement tolerances in accordance with MRTS05 Unbound Pavement
- Asphalt tolerances in accordance with MRTS30 Asphalt Pavements
- MRC Std Drawing A4-00044

Tolerances specific to the project are detailed on the design drawings and are included in Clause 2 of MRC Supplementary Specification Annexure 8104.1 Bridge Slab Crossings

8104.5 Preliminary

The Contractor is to submit the following documentation 4 weeks prior to commencing work or a prestart is conducted. **(MILESTONE)**:

- Works Procedure
- Erosion and Sediment Plan (as required for site/s)
- Traffic Management Plan and TGS's

Other requirements unique to the project will be listed in the MRC Supplementary Specification Annexure 8104.1 Bridge Slab Crossings

MILESTONE

8104.5.1 Materials

Supply of materials to site is the responsibility of the Contractor at their cost, where items are Principal supplied the nominated storage site shall be obtained from MRC Supplementary Specification Annexure 8104.1 Bridge Slab Crossings Section 3 and shall be the point of supply.

Concrete slabs shall be as specified on the project Drawings, in the absence of detail MRC Std Drawing A4-00044 shall apply. All concrete shall comply with the design drawings and MRTS70 with steel reinforcing complying with MRTS71.

All pavement materials shall be supplied, laid, and compacted in accordance with MRTS05, MRTS30 or MRC Supplementary Specification 8407.

8104.6 Construction

This section lays out the works operations with more detail based on specific requirements of this supplementary specification. Some activities may appear to include items which are stated within other specifications, the purpose is to reinforce that requirement specific to this supplementary specification.

8104.6.1 Work Operations

Work operations incorporated in this item include:

- a) Work operations included in Clause 2.1.5 of MRS01 "Introduction to Standard Specifications"
- b) Supplying all materials



All materials, plant, and labour required to carry out the works under this Specification is to be supplied by the Contractor.

In the case of the concrete slabs being manufactured elsewhere, the contractor is responsible for transport to site with all items required to be inspected at delivery to site prior to use. Any items which are damaged are not to be used and are to be returned to the supplier.

HOLD POINT

c) Preparation and pouring of crossing slabs

Prior to approval for placing the concrete a prepour inspection of formwork and reinforcing is to be carried out for conformity to the design drawings and MRC Std Drawing A4-00044. The Superintendent shall give approval to proceed with the respective pours.

HOLD POINT

All insitu poured bridge slabs (including formwork and reinforcing) associated with the slab crossing shall comply with the design drawings and be carried out in accordance with MRTS70, MRTS71, with inspections, geotechnical testing and geometric requirements applying unless otherwise noted in MRC Supplementary Specification Annexure 8104.1 Bridge Slab Crossings Annexure.

Immediately after the initial set of the concrete, curing shall commence and continue for a minimum of seven days. Plastic sheeting shall not be used as part of the curing process.

WITNESS POINT

Formwork is not to be stripped for 72 hours with the slabs not to be moved for 7 days or as per design drawings and approved by the Superintendent.

HOLD POINT

d) Preparation of the site storage area, unloading and storage at the site:

Where site storage is required the location shall be approved by the Superintendent, the contractor is responsible for all works required to ensure the storage area is suitable for the purpose of storage of the concrete slabs, this includes unloading and site safety. The storage site must not be in the verge area or the road pavement area unless approved as part of the Traffic Management Plan and the Superintendent.

e) Construction and installation in accordance with Standard Drawing A4-00044 and the Project Drawings and Specifications.

A Works Procedure and Traffic Management Plan is to be submitted to the Superintendent for approval 4 weeks before works commence. All inspections and testing requirements of MRTS70, MRTS05 and MRTS04 are to be complied with unless otherwise stated in MRC Supplementary Specification Annexure 8104.1 Bridge Slab Crossings.

MILESTONE

f) Carrying out excavations;

Prior to excavations commencing the contractor shall ensure all services are located. Any excavation of material shall be to level and grade as per design drawings, with all works carried out in accordance with MRTS04.

Bottom of excavation is to be inspected for areas of unsuitable material at time of concrete prepour inspection.

HOLD POINT



If unsuitable material is identified this is to be removed and replaced with approved material as per the instructions of the Superintendent.

g) Utilising or disposing of excavated material;

Excess excavated materials shall be disposed of by the contractor or utilised as per Superintendents instructions. Material stockpiled shall ensure that all Environmental ESC measures are in place and maintained.

h) Insitu Poured Supports

All loose material is to be removed from footings and/or slab bed and pavement subgrade.

Prior to approval for placing the concrete a prepour inspection of formwork and reinforcing is to be carried out for conformity to the design drawings and MRC Std Drawing A4-00044. The Superintendent shall give approval to proceed with the respective pours.

HOLD POINT

All concrete works (including formwork and reinforcing) associated with the slab crossing shall comply with the design drawings and be carried out in accordance with MRTS70, MRTS71, with inspections, geotechnical testing and geometric requirements applying unless otherwise noted in MRC 8104.1 Bridge Slab Crossings Annexure.

Immediately after the initial set of the concrete, curing shall commence and continue for a minimum of seven days. Plastic sheeting shall not be used as part of the curing process.

WITNESS POINT

Formwork is not to be stripped for 72 hours and loading not to occur for 7 days or as per design drawings and approved by the Superintendent.

HOLD POINT

i) Installation of Precast Concrete Slab

On approval to proceed by the Superintendent the mortar bedding and laying of concrete slabs shall be carried out in accordance with the design drawings, and MRC Std Drawing A4-00044.

HOLD POINT

All slabs are to be lifted in place and laid such that there is no gap between the slabs, where the slabs do not abut tightly and firmly against each other the contractor shall take necessary steps to ensure the slabs abut without a gap.

j) Construction of roadway approaches to concrete bridge crossing

All works associated with transitioning and constructing the formation and pavement approaches to the bridged slab crossing and along the pavement formation shall be as detailed in the design drawings and shall be carried out in accordance with MRTS04, MRTS05, and MRTS30 or MRC Supplementary Specification 8407 unless otherwise directed by the Superintendent.

WITNESS POINT

k) Clean up, backfilling, and turfing;

The verge and road pavement area is to be returned to the preconstruction condition. The site is to be kept cleaned of all debris, excavated material, and construction materials, with all waste removed from site.



8104.7 Post Construction

a) **Collection and submission of all As Constructed data including QA data requirements.**

Contractor is to collect the necessary Works as Executed documentation as required by MRC D20 - Drawings and Documentation for submission and approval prior to any further works commencing which may cover the slab/s.

HOLD POINT

Format of submitted “As Constructed” documentation shall be compliant with MRC Supplementary Specification 8919.

b) **Inspection of Completed Concrete Slab Crossing**

At the completion of all works the Contractor is to present the completed concrete slab crossover for inspection by the Superintendent, in particular line, level, grade of the sealed pavement formation.

HOLD POINT

8104.8 Measurement and Payment

Provision for these works shall be included in the scheduled unit rate for the items show in Clause 8104.3 of this Supplementary Specification and Annexure. No separate payment will be made for the works specified within this Supplementary specification or it’s annexure.

Version Control:

Version	Description	Reviewed / Endorsed	Date
1.0	Original issue	MRC	09.08.12
1.1	Specification review	MRC	20.11.2020
2.0	Specification Review	C. Sultana	02.06.2024