

Supplementary Specification

**MRC Supplementary Specification
8208 Causeways**

Revision 3.0

February 2026

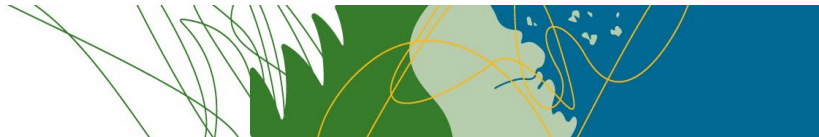


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8208.1 Introduction

This supplementary specification refers to the construction of concrete causeways and floodways, and the road/pavement approaches. Where the causeway works are to be carried out in conjunction with fishway passage refer to MRC Specifications 8217 & 8218 which must be referred to and complied with as part of the works.

8208.1.1 Definition of Terms

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

Term	Definition
Floodway	A roadway across a shallow depression or watercourse subject to flooding, specifically designed to overtop and constructed to resist the damaging effects of overtopping.
Causeway	A roadway across a watercourse or across tidal water, specifically designed to resist submergence through the installation of Culverts to drain the perennial or frequent flows through under the Floodway Structure.
Accepted Development Requirement (ADR)	Construction activity which meets all the technical and design criteria set out in Queensland's Accepted Development Requirements for Waterway Barrier Works (WWBW).
Waterway Barrier Works (WWBW)	Under the Fisheries Act 1994 to mean works to any dam, weir, crossing, fill, or complete or partial barrier within a waterway that limits fish access to, or movement within, a waterway — including both temporary and permanent works.
Fishway Ecologist	For the purposes of this specification, refers to a person or entity that is suitably qualified and experienced in fish passage biology or ecology and fish passage design and construction, understands Queensland's legislative requirements for fish passage structures, and also implements monitoring programs that ensure that the fish passage provisions are functioning as designed.

8208.2 Referenced Documents

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

- MRS01 *"Introduction to Specifications"*;
- MRTS01 *"Introduction to Technical Specifications"*
- MRS02 and MRTS02 *"Provision for traffic"*;
- MRS50 and MRTS50 *"Specific Quality System requirements"*
- MRS03 and MRTS03 *"Drainage, Retaining Structures and Embankment Slope Protections"*;
- MRS04 and MRTS04 *"General Earthworks"*;
- MRS05 and MRTS05 *"Unbound pavements"*;
- MRS27 and MRTS27 *"Geotextiles (Separation and Filtration)"*;
- MRS70 and MRTS70 *"Concrete"*;
- MRS71 and MRTS71 *"Reinforcing Steel"*;
- MRS11,12,20,21,22 & MRTS11,12,20,21,22 as applicable for seal treatment;



- MRS30 & MRTS30 *“Asphalt Pavements”*;
- MRS14 & MRTS14 *“Road Furniture”*;
- MRS45 and MRTS45 *“Road Surface Delineation”*;
- DTMR Std Drawings SD1250, SD1260, SD1270, SD1271, and SD1359
- MRC Supplementary Specification 8217 *“Fishways – Culvert Retrofitting”*;
- MRC Supplementary Specification 8218 *“Cast Insitu and Precast Fishway”*;
- MRC Supplementary Specification 8919 *“As Constructed Documentation”*;
- Accepted Development Requirements for Operational Work that is constructing or raising waterway barrier works – Department of Agriculture and Fisheries;
- Other Qld State Government and Mackay Regional Council Operational Works Legislation;
- MRC D20 *“Drawings and Documentation”*; and
- the project Drawings

8208.3 Description of Work Items

Work items incorporated by this supplementary specification are identified in Section 8208.6 and 8208.7 with individual activities/tasks for measurement and payment sourced from the Bill of Quantities and listed in MRC Supplementary Specification Annexure 8208_1 Causeways & Floodways Section 1

8208.4 Quality Systems Requirements

The contractor shall prepare a quality plan reflective of the requirements of this specification and compliant with MRTS 50. The quality plan is to be submitted to the Superintendent for approval four (4) weeks prior to site works commencing.

MILESTONE

8208.4.1 Std Test Methods (Testing Regime)

Unless otherwise approved by the Superintendent the following minimum testing regime applies to this specification:

The minimum test frequencies and minimum numbers of tests shall be as follows:

- Concrete shall be tested in accordance with MRTS70 Concrete.
- Earthworks shall be tested in accordance with MRTS04 General Earthworks.
- Bedding and backfill to culverts if required shall be tested in accordance with MRTS03 and MRTS04
- Pavement shall be tested in accordance with MRTS05 Unbound Pavement
- Seal surfacing shall be tested as per the relevant MRTS specification MRTS11/12/19/20/21/22, MRTS30.
- Fishway compliance as required by MRC Supplementary Specification 8217 & 8218 (as required) and the requirements of ADR compliance.

Where there are additional testing requirements these are included in Clause 2 of MRC Supplementary Specification Annexure 8208_1 Causeways

8208.4.2 Hold Points, Witness Points and Milestones

Milestone



Milestone is a point within a project which marks the start or completion of an activity or compliance requirement. Generally associated with provision of records or data for verification with the projects contract and specification.

Hold Points

Hold points are noted on various Sections of this Specification.

“HOLD POINTS” are critical stages of the work, which require inspection by the Superintendent (or his nominated representative) and beyond which the Contractor will not be permitted to proceed without the written approval of the Superintendent.

A written “request for inspection” form shall be submitted to the Superintendent at least 48 hours prior to reaching the relevant “HOLD POINT”. One copy shall be submitted for each inspection. The signed copy will be handed back to the Contractor after the inspection to sanction work to proceed to the next stage or noting what work has to be done prior to re-inspection. This may involve inspection of the works by the Superintendent or approval of test results forwarded to the Superintendent by the Contractor.

Witness Points

Witness points are also important stages of work. However, these are not necessarily as critical work stages as defined by the hold points. Witness points are where the Superintendent (or his/her nominated representative) may review, witness, and inspect the work. The activities however may continue to proceed.

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

Activity	Inspection Type	When	Reference
Permits for water way barrier from SARA	Hold Point	Prior to works tender documents being issued	8208.5
Construction Procedure and other required documents as per 8208.5	Milestone	4 Weeks prior to works commencing	8208.5
Seal Design	Milestone	14 days prior to request for pavement proof roll	8208.5 & 8208.6.14
Inspection of delivered items	Hold Point	At delivery time for each item.	8208.6.2
Prestart Meeting	Hold Point	Prior to works commencing on site	8208.6.3.2
Final location of causeway works extents including any side track	Hold Point	During site survey layout.	8208.6.3.3
Construct temporary diversion of watercourse to maintain water flows and fish passage as required by approved permit/s	Hold Point	Prior to excavation of existing causeway structure.	8208.6.4
Redirection of watercourse through permanent culverts	Hold Point	When works allow for redirecting through permanent drainage structure	8208.6.4

if required and clean up temporary diversion			
Construction of side track and take up at completion of works	Witness Point	Prior to road being closed and at completion of works.	8208.6.5
Installation of temporary road furniture and line marking	Witness Point	Prior to sidetrack being opened.	8208.6.5
Unsuitable material at excavated floor	Hold Point	Prior to trimming for subgrade approval	8208.6.7
Subgrade proof roll and approval	Hold Point	After submission and acceptance of QA test results and survey results.	8208.6.7
Select Fill proof roll and approval	Hold Point	After submission and acceptance of QA test results and survey results.	8208.6.7
Bed/base for Culverts if required	Hold Point	Prior to approval to proceed with blinding layer	8208.6.8
Blinding layer pouring if required	Hold Point	After approval to proceed with pour	8208.6.9
Approval to proceed with slab for culverts if required	Hold Point	No earlier than 7 days after pouring of blinding layer	8208.6.9
Prepour Inspection of formwork and reinforcing for culvert slab if required	Hold Point	Prior to concrete pour approval to proceed	8208.6.9
Finish of concrete slab for culverts if required	Witness Point	Prior to concrete hardening	8208.6.9
Curing of concrete slab to occur immediately after pouring	Witness Point	Immediately after pouring for 7 days	8208.6.9
Stripping of formwork approval	Hold Point	No earlier than 72 hours after concrete pour finish, approval by Superintendent	8208.6.9
Submission of alternative works to design drawing	Hold Point	10 days prior to works commencing	8208.6.9
Installation of culverts if required	Hold Point	No earlier than 7 days after concrete pour finish and after submission and acceptance of compliant QA survey results submitted.	8208.6.10
Approval to backfill	Hold Point	After submission of all testing, survey, and compliance statements	8208.6.10



Backfilling of culverts if required	Witness Point	After approval to proceed granted by Superintendent	8208.6.10
Bed/subgrade under causeway slab approval	Hold Point	After proof roll and submission and acceptance of QA test results and survey results. Approval to proceed with causeway concrete slab set up	8208.6.11
Prepour Inspection of formwork and reinforcing for culvert slab	Hold Point	Prior to concrete pour approval to proceed	8208.6.11
Finish of concrete slab for causeway	Witness Point	Prior to concrete hardening	8208.6.11
Curing of concrete slab to occur immediately after pouring	Witness Point	Immediately after pouring for 7 days	8208.6.11
Stripping of formwork approval	Hold Point	No earlier than 72 hours after concrete pour finish, approval by Superintendent	8208.6.11
Joints installed as per design drawings and sealed	Witness Point	After formwork is removed	8208.6.11
Bed/subgrade under aprons, nib walls, headwalls, batter protection	Hold Point	After proof roll and submission and acceptance of QA test results and survey results. Approval to proceed with causeway concrete slab set up	8208.6.12
Prepour Inspection of formwork and reinforcing for aprons, nib walls, headwalls, batter protection	Hold Point	Prior to concrete pour approval to proceed	8208.6.12
Finish of concrete slab for aprons, nib walls, headwalls, batter protection	Witness Point	Prior to concrete hardening	8208.6.12
Curing of concrete to occur immediately after pouring	Witness Point	Immediately after pouring for 7 days	8208.6.12
Stripping of formwork approval	Hold Point	No earlier than 72 hours after concrete pour finish, approval by Superintendent	8208.6.12
Joints installed as per design drawings and sealed	Witness Point	After formwork is removed	8208.6.12
Riprap installation	Hold Point	At completion of installation of riprap.	8208.6.13
Fishway passage Installation (as required), inspections,	Hold Point	During works to inlet and outlet to causeway structure	8208.13.1

testing, and survey requirements			
Subgrade proof roll approaches	Hold Point	After submission and acceptance of QA test results and survey results.	8208.6.14
Pavement proof roll – all layers	Hold Point	After submission and acceptance of QA test results and survey results for each layer.	8208.6.14
Pavement inspection prior to sealing works	Hold Point	24 hours prior to seal works taking place	8208.6.14
Installation of road furniture and line marking	Hold Point	Prior to road being reopened and side track being taken up	8208.6.14
All disturbed areas cleaned, tidied, and returned to its natural state	Hold Point	At completion of works prior to Works as execute inspection.	8208.6.15
As Constructed documentation submitted and accepted	Hold Point	4 weeks prior to Works as Executed inspection request	8208.7.1
Erosion and sediment control measures in place	Hold Point	At completion at Works as Executed Inspection	8208.7.2

8208.4.3 Construction , Survey Requirements and Tolerances

Unless otherwise approved by the Superintendent the following construction survey requirements and tolerances shall apply to this Supplementary 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.
- Bedding, laying, and backfill to culvert tolerances if required in accordance with MRTS03
- Pavement tolerances in accordance with MRTS05 Unbound Pavement

Survey requirements and tolerances specific to the project are detailed on the design drawings and are included in Clause 2 of MRC Supplementary Specification Annexure 8208_1 Causeways

8208.5 Preliminary

The contractor is to ensure their construction activities are based on the design drawing and documentation requirements. Alternate construction materials and procedures are not acceptable unless site conditions dictate and at the Superintendents approval.

The project design manager shall ensure that the required State government permits have been obtained and are current prior to the issuing of tender documents.

The Contractor is to submit the following documentation 4 weeks prior to commencing work or a prestart is conducted:

- Works procedure – all activities and order of construction;

- Site Plan of set out of offices, storage facilities, stockpiles, and access to and from work site;
- Contractor's personnel experience, qualification, skills and training (10 days prior to undertaking work on site);
- Permits and/or documentation from Government bodies approving the proposed works and the methodology of the works;
- Environmental Management Plan;
- Erosion and Sediment Control Plan (as required for site/s);
- Traffic Management Plan and TGS's;
- Quality Plan detailing requirements of MRTS50 and MRS50 and MRC Supplementary Specification Clause 8208.4;
- All backfill, embankment fill, unbound pavement, and rip rap material compliance tests;
- Seal Design (14 days prior to pavement proof roll request).

Other preliminary requirements unique to the project will be listed in the MRC Supplementary Specification Annexure 8208_1 Causeways.

MILESTONE

The contractor is to ensure their construction activities are based on the design drawing requirements. Alternate construction materials and procedures are not acceptable unless site conditions dictate and at the Superintendents approval.

8208.5.1 Materials

Supply of all 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 8208_1 Causeways Section 3 and shall be the point of supply.

Reinforced Concrete Box Culverts (RCBC) are the specific culvert type for use as relates to this specification. Reinforced Concrete Pipe Culverts (RCPC) are to only be installed if detailed on the design drawings for use.

Unless otherwise instructed by the Superintendent existing drainage culverts and end wall structures are to be demolished and disposed of, where items are to be salvaged or reused MRC Supplementary Specification Annexure 8208_1 Causeways Section 4 will detail this requirement.

All items and materials shall be supplied in accordance with Specifications MRTS03, MRTS04, MRTS05, MRTS70, MRTS71 and MRTS27.

All materials shall be stored in accordance with the manufacturers requirements and as detailed in the Contractors works procedure and in accordance with the ADR for the site.

8208.5.2 Contractors Personnel

Personnel, sub-contractors and suppliers utilised in the construction of causeways and peripheral infrastructure shall have a minimum of 5 years' experience in the installation of insitu and precast concrete products, earthworks and pavement works, and thorough knowledge of State Government legislation relating to waterway barrier works/fish passage and other requirements such as vegetation removal and access to the site.

The Contractor shall engage a suitably qualified and experienced Fishway Ecologist to provide advice in relation to:

- Ensure all permits are in place and works have approval to proceed;
- Procure (select) materials for any associated fishway construction (as required);



- Supervise all works on site during construction of the causeway and any associated fishway (as required);
- Ensure all works comply with the design drawings and documentation;
- Carry out minor amendments to the works scope as site conditions dictate;
- Endorse “As Constructed” drawings and documentation for Contractors submission to MRC;
- In conjunction with MRC Superintendent inspect fishway for defects during defects liability period, notifying MRC and Contractor of requirements to repair;
- Monitor fishway for operation as intended.

The Contractor shall provide documented evidence for the Superintendent’s approval to demonstrate the experience, qualification, skills and training of proposed personnel, sub-contractors and suppliers a minimum 4 weeks prior to works commencing and then at least 10 working days prior to the relevant personnel, sub-contractors and suppliers undertaking works on the project as works are scheduled to commence.

HOLD POINT

8208.5.3 Care of Services

The Contractor shall take care to avoid damage to or interference with any services and shall be liable for the immediate repair or reinstatement of any such damage or for interference caused directly or arising indirectly from anything done or omitted to be done. The Contractor shall carry out all temporary work necessary to adequately support and protect such services.

8208.5.4 Provision for Working In and Around Water

The Contractor is to be aware of the following when performing the required works;

8208.5.4.1 Inundation

The structure may be subject to inundation from:

- Stormwater flow from rainfall events. The works may need to be secured at all times for this occurrence and work sites evacuated while the stormwater passes. The duration and severity of this event would vary with the duration and intensity of the rainfall that occurs;
- Tidal water inundation in tide-affected locations. This will restrict the available time for the work to be completed and the structure may need to be evacuated in the event of this inundation. Note also options for flow restriction for the categories of waterway in the accepted development requirements for operational work that is constructing or raising waterway barrier works;
- Standing water in waterways. The Contractor shall be responsible and may need to make provision in their works procedure and SWMS for dewatering work sites subject to inundation from standing water to enable works to proceed.
- Any temporary bunding installed during repair works must take into account the relevant time restrictions referred for declared waterway categories in the Accepted Development Requirements for Operational Work that is constructing or raising waterway barrier works;

8208.5.4.2 Electrical Hazard

Working with electrical tools may be restricted when a site is affected by water. There may be low levels of continual water flow in the bridges for extended periods of time. The Contractor shall make the necessary arrangements to ensure a safe workplace at all times.



8208.5.5 Environmental

The Contractors Environmental Plan shall be reflective of the requirements of MRTS51 and MRS51 and be submitted for approval by the Superintendent 4 weeks prior to site works commencing.

MILESTONE

8208.5.5.1 General

The Contractor shall remove all rubbish, debris, disused materials etc., from the Site. The Site shall be maintained in a clean state.

The Contractor shall be responsible for ensuring no debris is deposited on public or private rights of way because of the works, including any deposits arising from the movement of plant and vehicles, and the exposing of aggregate process.

The Contractor shall keep pollution in the vicinity of the Works within reasonable minimum limits noting that this clause does not exempt the Contractor from complying with the limits controlled or required by legislation.

The Contractor shall collect, transport and dispose of waste at a registered waste facility.

8208.5.5.2 Noise and Dust Control

All plant and equipment supplied by the Contractor for use on the Works shall be selected to ensure nuisance caused by noise is minimised. The use of plant and equipment shall meet the relevant noise control legislation.

The Contractor shall minimise nuisance caused by dust and shall provide measures necessary to avoid nuisance caused by dust to the public and surrounding environment. Complaints shall be handled and recorded as per the Contractors management plans.

The Contractor must ensure access is maintained for residents at all times.

8208.5.5.3 Water Supply Protection

It is critical that contaminants from repair works are prevented from entering the waterway. The Contractors Environment Management Plan shall nominate the measures to be put in place.

Any such contamination must be cleaned up and legally disposed of at the Contractor's expense at a registered waste facility.

8208.5.5.4 Vegetation Removal within Waterway and for Access

While vegetation removal within the road reserve is exempt under the Vegetation Management Act the Contractor shall note and take necessary action to meet the requirements of the relevant Accepted Development Requirements (ADR) referenced in relation to the following matters in relation to both the works to be undertaken and access to the waterway bed level:

- Minimise disturbance to the instream bed and banks e.g. use geofabric as a work base, or construct a work platform above the substrate
- If it is necessary to remove vegetation, aim to cut vegetation no lower than ground level and leave the root in the ground to aid in stabilisation. If deep excavation is required during construction the roots may only be removed within the construction footprint area.
- Minimise the area of land disturbed or compacted e.g. construct a work platform above the substrate
- Ensure the least volume of soil or sediment is disturbed
- Limit the use of machinery within waterways
- Use machinery no greater than the capacity required for the purpose



- Implement sediment and erosion protection measures

Any works undertaken to facilitate access to the causeway level shall take note of Accepted Development Requirements applicable and must as part of the works be fully restored to preconstruction line and level and the surface fully revegetated.

Where a side track is to be constructed on a temporary basis the Contractor must comply with the requirements of the conditional permit issued in order to carry out the works.

8208.5.6 General Workplace Health and Safety Requirements

As a condition of this document, it is required that the Contractor and its workers (including all sub-contractors etc., and their workers) engaged to perform a service or work on site must at all times ensure (so far as reasonably practicable) the health and safety of all persons who are, or may be, affected by work under this Supplementary Specification or the services provided.

8208.5.6.1 Council Work Health Safety Contractor Requirements

As a minimum, the Contractor must ensure they and their workers (including all Contractor's sub-contractors etc.) comply with the following work health and safety requirements:

- Undertake Council Contractor and site inductions prior to commencing work.
- Ensure all workers are competent, and provide proof of competencies, licenses, and training on request.
- Have an approved safe system of work (including risk assessment) for the task and ensure the work is completed according to this safe system of work.
- Provide adequate supervision for all high-risk construction tasks.
- All incidents and near misses are to be reported to their Council representative within 60 minutes.
- Participate in Contractor pre-start meetings, safety interactions, site meetings and site inspections.
- Review information provided by Council such as site-specific hazards, risks and interaction issues and implement controls to, so far as reasonably practicable, eliminate, or if that is not possible, mitigate the risk.
- Supply safe plant and equipment with pre-start checks, maintenance/ service records and manufacturer's manual.
- For all hazardous chemicals, ensure current Safety Data Sheets (SDS) are available and that appropriate controls (including as required under SDS requirements) are implemented.
- Comply with Council Safety, Drug and Alcohol and Fitness for Work policies.
- Be familiar with applicable site emergency procedures, closest emergency assembly point and sign in and out of site registers where required.
- Compliance with any reasonable direction given by Council relating to work health and safety.

8208.5.6.2 Permits for Work

The Contractor must ensure applicable permits for the various work activities are completed and approval issued by the statutory body for those works, all requirements for submission, completion, and obtaining permits shall be at the Contractors cost.

8208.5.6.3 Safe Systems of Work / Risk Assessment

The Contractor must prepare and submit a safe method of work (risk assessment) and relevant controls prior to commencement of work.



The completed risk assessment is to be provided to the Superintendent for review and approval prior to works commencing. Safe Work Method Statements (SWMS) are required for all high-risk construction activities and Job Safety Analysis (JSA) or similar risk assessments are required for other tasks. The risk assessment (whether SWMS, JSA or other) must be reviewed and signed by the workers prior to undertaking the work.

MILESTONE

The Contractor shall implement a Safety Management System (SMS) that includes sections addressing the project scope.

8208.5.6.4 Legislative Compliance

Without limiting the Contractor's other obligations, the Contractor must comply with all Acts, Regulations, Standards and Codes of Practice about work health and safety matters that are applicable to the scope of work undertaken or services being provided.

8208.5.7 Works Procedure

The Contractor shall prepare a works procedure for all activities required under this specification which also address WH&S specific requirements for the site, this shall include but not be limited to the following;

- i. Site setup, including traffic management and public consultation;
- ii. Identification of underground utilities which impact the works and the proposed treatment to address the impacts;
- iii. Staging of works;
- iv. Individual activity construction procedures, side track installation and removal, excavation, under-layers, drainage, bedding, concrete works, rip rap, earthworks, pavement works, seal/asphalt works, linemarking and road furniture;
- v. Testing and inspections as required;
- vi. Timeline of works;
- vii. Collection of "As Constructed" data.

The works procedure shall be submitted to the Superintendent for approval four (4) weeks prior to site works commencing.

MILESTONE

8208.6 Construction

Carrying out all works associated with the construction and installation of the causeway and approaches with materials as specified on project drawings.

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.

8208.6.1 Work Operations

Work operations incorporated in this item are those included in Clause 2.1.5 of MRS01 "Introduction to Standard Specifications" and the following work scope activities and associated sub activities;

8901.6.1.1 Work Scope

The scope of works (including all associated sub activities) covered under this specification is as follows:



- Supply of all materials, equipment and personnel;
- Site layout with Superintendent;
- Site Establishment and Disestablishment;
- Carry out all works to maintain creek flows and fish passage (If required);
- Install, maintain, and take up side track (If required);
- Bunding works as required to carry out installation of causeway and associated infrastructure;
- Excavate and disposal of existing infrastructure;
- Earthworks to formation;
- Excavate and compact bed for culverts;
- Insitu poured base slab to reinforced concrete box culverts (RCBC) if required;
- Install and backfill reinforced concrete box culverts if required;
- Concrete causeway slab setup and concrete pour;
- Insitu poured aprons and nib walls, headwalls, and batter protection;
- Riprap protection;
- Construction of roadway approaches to causeway;
- Clean site including side track;
- Collate "As Constructed" details/data and submit;

8208.6.2 Supply of All Materials

All materials, plant and equipment, and labour required to carry out the works under this Specification is to be supplied by the Contractor, where materials are Principal supplied the designated storage site will be the point of supply for the purposes of this Specification.

All items shall 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

8208.6.3 Site Establishment and Layout of Causeway

Prior to any site works commencing, including site establishment the Contractor shall formally notify the relevant State Government Departments of their intention to commence work. This shall be in the form of written notice and include any approved conditional permits or Accepted Development Requirement (ADR), the timeframe of notification shall be as required by the State Government Department i.e. SARA/DAF.

8208.6.3.1 Site Establishment and Disestablishment

The Contractor shall establish the work site in accordance with their submitted site plan, any ADR conditions, and be approved by the Superintendent. If the site set up location is within private property the Contractor shall submit to the Superintendent the property owners written approval and any conditions associated with using the private land at no cost to the Principal.

8208.6.3.2 Prestart Meeting

Prior to any site works commencing the Contractor shall conduct a prestart site meeting (including site inspection) with the MRC Superintendent and State Government Personnel. This meeting shall ensure all requirements and responsibilities for the installation of the causeway comply with the ADR assessment and additional required arrangements that may be deemed necessary.

HOLD POINT



8208.6.3.3 Site Layout of Works

The final location of the causeway (including temporary creek diversion and side track location, as required) is to be marked out on site and shall be inspected and approved by the Superintendent prior to demolition or excavation commencing.

HOLD POINT

8208.6.4 Carry Out All Works to Maintain Creek Flows and Fish Passage (If required)

As required by the design drawings and approved permit/s install temporary drainage culvert/s and works required to divert the flows of the watercourse through this temporary culvert.

HOLD POINT

As site works enable carry out works to divert the water course through the permanent culvert and take up the temporary culvert and return the area to its natural state prior to works commencing.

HOLD POINT

8208.6.5 Install, Maintain, and Take Up Side Track (As required)

Construct a side track as specified within the design drawings and as determined on site by the Superintendent. After installation the maintenance of the side track is the responsibility of the contractor at their cost, this includes traffic management. At completion of works take up side track and return area to natural state that existed prior to works commencing. Side track 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.

WITNESS POINT

If no side track is detailed on the design drawings the contractor shall incorporate traffic management into their works procedure at their cost.

Remove existing road furniture, posts and footings, and pavement markings, and dispose of by the contractor as detailed in the design drawings unless otherwise instructed by the Superintendent.

Installation of temporary road furniture and line marking as required to carry out works under this specification as set out in the Contractors approved Traffic Management Plan as stages of construction dictate.

WITNESS POINT

8208.6.6 Excavate Existing Infrastructure and Disposal of Structure and Components

All works required to excavate, demolish, take up the existing causeway structure/s as detailed in the design drawings shall be disposed of by the contractor in accordance with their Environmental Plan unless otherwise instructed by the Superintendent.

8208.6.7 Earthworks to Formation

Carry out earthworks as required to excavate or fill the formation to the design drawing levels, width, and crossfall levels. All works are to be carried out in accordance with MRTS04.Bed/Subgrade is to be inspected for areas of unsuitable material.

HOLD POINT

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

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



Bed/subgrade preparation is to be carried out as per MRTS04 and is to be presented for inspection and proof roll for the Superintendent with inspections, geotechnical testing and survey requirements applying unless stated otherwise in MRC Supplementary Specification Annexure 8208_1 Causeways.

HOLD POINT

Where indicated on the design drawings select fill is to be supplied, delivered, laid and compacted to the levels, width, and crossfalls as detailed. Unless otherwise specified the minimum thickness shall be 150mm of unbound pavement Type 3.5 in accordance with MRTS05 and be compacted to 100%SDD.

HOLD POINT

8208.6.8 Excavate and Compact Bed for Culverts

Where culverts are shown and set out in the design drawings excavation shall be carried out in accordance with the requirements of MRTS03, with inspections, geotechnical testing and survey requirements applying unless stated otherwise in MRC Supplementary Specification Annexure 8208_1 Causeways

Prior to bed preparation commencing all loose material is to be removed from excavations and/or culvert slab base. Bed/subgrade preparation is to be carried out as per MRTS04 and is to be presented for inspection by the Superintendent.

HOLD POINT

8208.6.9 Insitu Poured Base Slab to Reinforced Concrete Box Culverts (RCBC) if required

Prior to the pouring of the culvert base slab and aprons a blinding layer is to be constructed as detailed in the design drawings and in accordance with DTMR Std Drawings SD-1250 and SD-1260.

HOLD POINT

The blinding layer shall be cured for a minimum of 7 days, after which the Superintendent shall grant approval to proceed with the RCBC slab. All works are to be carried out in accordance with the design drawings, MRTS03, MRTS04, and DTMR Std Drawings SD-1250 and SD-1260.

Prior to pouring the base slab a prepour inspection of formwork and reinforcing is to be carried out. The Superintendent shall give approval to proceed with the pour.

HOLD POINT

All concrete works associated with the base slab shall be carried out in accordance with MRTS70, MRC standard drawings, and the design drawings with inspections, geotechnical testing and survey requirements applying unless otherwise stated in MRC Supplementary Specification Annexure 8208_1 Causeways.

The Superintendent shall give the approval to proceed with the placing of concrete. Finishing of the concrete is to be in accordance with the design drawings. Where the structure is a fish passage the finish is to be in accordance with DTMR Std Drawings SD1270 & 1271.

WITNESS POINT

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 project plans as approved by the Superintendent.

HOLD POINT



Where the contractor proposes alternatives to the design drawings this must be submitted and approved by the Superintendent a minimum 10 working days prior to works commencing.

HOLD POINT

8208.6.10 Install and Backfill Reinforced Concrete Box Culverts if required

Culverts shall be installed as required by the design drawings and works be carried out in accordance with MRTS03, DTMR Std drawings SD1250, SD1260, SD1270, and SD1271, with inspections, geotechnical testing and survey requirements applying unless otherwise stated in MRC Supplementary Specification Annexure 8208_1 Causeways.

HOLD POINT

Backfilling of culverts shall not commence until all the conformance and As Constructed Survey requirements have been met and notice of such works provided to the Superintendent.

HOLD POINT

Backfill materials and backfilling process shall be carried out in accordance with MRTS03, and MRTS04. Layers are to be laid and compacted on alternate sides of the culverts and in 150mm maximum compacted layers.

WITNESS POINT

8208.6.11 Concrete Causeway Slab Setup and Concrete Pour

Bed/subgrade preparation for the causeway slab is to be carried out as per MRTS04, MRTS05, and is to be presented for inspection to the Superintendent with inspections, geotechnical testing and survey requirements applying unless stated otherwise in MRC Supplementary Specification Annexure 8208_1 Causeways Annexure. The Superintendent shall grant approval to proceed with the causeway slab set up once all quality documentation has been submitted and is compliant with this specification.

HOLD POINT

Prior to approval for placing the concrete in the designated section of causeway slab, a prepour inspection of formwork and reinforcing is to be carried out. In conjunction with the reinforcing all joints and dowels linking to adjacent section pours are to be installed as per the design drawings prior to the respective pours taking place. The Superintendent shall give approval to proceed with the respective pours.

HOLD POINT

All concrete works (including formwork and reinforcing) associated with the causeway slab shall comply with the design drawings and be carried out in accordance with MRTS70, MRTS71, with inspections, geotechnical testing and survey requirements applying unless otherwise in MRC Supplementary Specification Annexure 8208_1 Causeways.

The Superintendent shall give the approval to proceed with the placing of concrete. Finishing of the concrete is to be in accordance with the design drawings.

WITNESS POINT

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



All joints are to be installed and sealed as per the design drawings.

WITNESS POINT

8208.6.12 Insitu Poured Aprons and Nib Walls, Headwalls, and Batter Protection

Prior to the pouring of the aprons a blinding layer is to be installed as detailed in the design drawings and in accordance with DTMR Std Drawings SD-1250 and SD-1260.

HOLD POINT

The Superintendent is to grant approval to proceed with the aprons. All works are to be carried out in accordance with the design drawings, MRTS03, MRTS04, and DTMR Std Drawings SD-1250 and SD-1260.

All concrete works (including formwork and reinforcing) associated with the aprons, nib walls, headwalls, and batter protection shall comply with the design drawings and be carried out in accordance with MRTS70, MRTS71, and the design drawings with inspections, geotechnical testing and survey requirements applying unless otherwise specified in MRC Supplementary Specification Annexure 8208_1 Causeways.

Prior to carrying out concrete works on the aprons, nib walls, headwalls, and batter protection a prepour inspection of formwork and reinforcing is to be carried out. In conjunction with the reinforcing all joints and dowels linking to adjacent section pours, and geofabric and weep holes are to be installed as per the design drawings prior to the respective pours taking place. The Superintendent shall give approval to proceed with the pour.

HOLD POINT

The Superintendent shall give the approval to proceed with the placing of concrete. Finishing of the concrete is to be in accordance with the design drawings. Where the structure is a fish passage the finish is to be in accordance with DTMR Std Drawings SD1271.

WITNESS POINT

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 project plans as approved by the Superintendent.

HOLD POINT

All joints are to be installed and sealed as per the design drawings.

WITNESS POINT

8208.6.13 Riprap Protection

Supply of rock materials and its source shall be approved by the Superintendent prior to use, where possible existing materials shall be utilised as riprap. Riprap works to apron and batter protection to comply with the design drawings and to be carried out in accordance with MRTS03 Clause 35.

HOLD POINT

8208.13.1 Installation of Fish Passage

Installation works required to maintain or improve fish passage at the causeway shall be carried out as required by MRC Supplementary Specifications 8217 and 8218, the ADR, and any conditional requirements from a Waterway Barrier Works (WWBW) permit (as required).



All inspections, geotechnical testing and survey requirements applying unless otherwise in MRC Supplementary Specification Annexure 8217_1 and/or Annexure 8218_1.

HOLD POINT

8208.6.14 Construction of Roadway Approaches to Causeway

All works associated with transitioning and constructing the formation and pavement approaches from the saw cut of the existing pavement to the causeway shall be as detailed in the design drawings and pavement design and shall be carried out in accordance with MRTS04 and MRTS05.

(Hold Point – Excavated floor earthworks, subgrade for proof roll, and HOLD POINT – Proof roll for both select fill layer and base pavement layer).

HOLD POINT

Adjoining swale drains shall be cleaned and reshaped as detailed in the design drawings, where there is an absence of detail the following table set out the treatment of the swale drains as applies to this specification.

Swale Drain Grade	Treatment
0.4% - 2%	Concrete lined
2% - 5%	Grass lined
5% - 10%	Rock lined
>10%	Concrete lined

Seal design is to be submitted to MRC 14 days prior to pavement proof roll being requested.

HOLD POINT

An inspection of surface and proof roll shall be carried out in the presence of the Superintendent a minimum 24 hours prior to seal works commencing shall be carried out with the Superintendent giving approval to proceed.

HOLD POINT

Seal works are to be carried out as per the relevant MRT Specification and design drawings unless otherwise directed by the Superintendent.

Supply and install new road furniture and pavement markings as detailed in the design drawings and in accordance with MRTS14 and MRTS45.

HOLD POINT

8208.6.15 Clean Site Including Side Track

The site is to be cleaned of all debris, excavated material, and construction materials and returned to its natural state prior to works occurring.

Stabilisation of the watercourse bed shall be carried out in accordance with the ADR and/or the Waterway Barrier Works (WWBW) permit (as required). Disturbed areas including revegetation are to be rehabilitated to the requirements of the relevant State Government Department and any issued permit, the design drawings, and erosion and sediment control measures installed as per the Contractors approved Erosion and Sediment Control Plan and as directed by the Superintendent. Rehabilitation works and Sediment Control measures must be carried out prior to the request for an "On maintenance" inspection.



8208.7 Post construction

Items which close out the project, and readies the project for the “On Maintenance” inspection. All items below **MUST** be complied with prior to the Contractor requesting an “On Maintenance” inspection and/or as required during the Defects/Liability (On Maintenance) period.

8208.7.1 Collection and Submission of All As Constructed Data.

Contractor is to supply and submit “As Constructed” documentation as required by *MRC D20 - Drawings and Documentation* for approval by the Superintendent 4 weeks prior to requesting an “On Maintenance” inspection.

Certification of works shall be submitted with the “As Constructed” Plans and documentation, format of submitted “As Constructed” documentation shall be compliant with MRC Supplementary Specification 8919.

8208.7.2 Erosion and Sediment Control Plan

ESC measures are to be kept in place and maintained until the Superintendent approves of the removal of such measures.

8208.8 Measurement and Payment

Provision for these works shall be included in the scheduled unit rate for the items show in Clause 8208.3 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		23.11.2021
2.0	Review of specification	C. Sultana	07.02.2024
3.0	Full Review of Specification	C. Sultana	12.02.2026