



TECHNICAL SPECIFICATION

2025 DRFA RESTORATION WORKS – PACKAGE 2

CONTRACT NO: ESC2026-006

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1. Referenced Documents

To the extent that they are incorporated (whether physically or by reference) into the Technical Specification the documents listed below are deemed to be incorporated into the Contract.

Table 1: Main Road Referenced Specifications

Reference	Description
MRTS01	Introduction to Technical Specifications
MRS01	Introduction to Specifications
MRTS02	Provision for Traffic
MRS02	Provision for Traffic
MRTS03	Drainage Structures, Retaining Structures and Embankment Slope Protections
MRTS04	General Earthworks
MRTS05	Unbound Pavements
MRTS07A	Insitu Stabilised Subgrades using Quicklime or Hydrated Lime
MRTS07B	Insitu Stabilised Pavements using Cement or Cementitious Blends
MRTS10	Plant Mixed Lightly Bound Pavements
MRTS11	Sprayed Bituminous Treatments (Excluding Emulsion)
MRST12	Sprayed Bituminous Emulsion Surfacing
MRTS14	Road Furniture
MRS14	Road Furniture
MRTS17	Bitumen and Multigrade Bitumen
MRTS18	Polymer Modified Binder (including Crumb Rubber)
MRTS19	Cutter Oils
MRTS20	Cutback Bitumen
MRTS21	Bituminous Emulsion
MRTS22	Supply of Cover Aggregate
MRTS23	Supply and Delivery of Quicklime and Hydrated Lime for Road Stabilisation
MRTS27	Geotextiles Separation and Filtration
MRTS28	Contractor's Site Facilities and Camp
MRS28	Contractor's Site Facilities and Camp
MRTS30	Asphalt Pavements
MRTS38	Pavement Drains
MRTS45	Road Surface delineation
MRTS50	Specific Quality System Requirements
MRTS51	Environmental Management
MRTS52	Erosion and Sedimentation Control
MRTS58	Subgrade Reinforcement using Pavement Geosynthetics
MRTS70	Concrete
MRTS170	Public Utilities in Road Projects Site Works
MRTS171	Public Utilities in Road Projects Principal Contractor Responsibilities
MRTS264	Type-1 Portable Traffic Signals
MRTS265	Type-2 Portable Traffic Signals

2. General – General, Setout, Survey

This Specification defines construction requirements in accordance with the Scope of Works.

The Contractor shall construct works under contract to conform with the Scope of Works and any supplied design drawings.

The Contractor is responsible for:

- Verification of crossfalls, superelevation, and final layer thickness
- All horizontal and vertical setting out (no survey control provided)

As these works are restorative in nature, the Contractor shall undertake centreline and vertical pickup and set out to match existing road geometry, including reinstatement of all pre-existing crossfalls and superelevation, where required.

Where different levels are required (e.g. through floodways), the Superintendent will provide direction on request to ensure alignment with existing road levels.

3. Material Resources

Gravel and water resources shall be sourced from approved gravel pits and approved water sources identified in the construction documents. Water and gravel resources identified in the sketches provided have the appropriate cultural and other clearances. Resources not listed in the approved documents, must not be used without written approval from the Superintendent.

The Contractor shall stockpile gravel of sufficient quantity and quality which meets the Specification requirements to complete the works described in the Scope of Works.

No works are permitted outside of the approved Gravel Pit / Sales Permit area as delineated in gravel pit plans unless approved by the Superintendent or the Superintendents Representative. Refer to the Work Summary table in the construction documents for calculated compacted gravel quantities required to complete the works.

Entry and exit from registered gravel pits shall be restricted to access tracks as delineated in the gravel pit plans within Cultural Heritage clearance boundaries and sales permit boundaries only.

Management of each quarry site should be carried out in conjunction and compliance with all relevant Council plans and policies.

4. Gravel Stockpiling

4.1 Gravel Pit Establishment and Initial Testing

The supply of unbound pavement materials from nominated gravel extraction site shall be the responsibility of the Contractor.

Dewatering of gravel pits shall be the responsibility of the Contractor.

4.2 Materials extracted shall conform to the following requirements:

Prior to stockpiling and extraction from gravel extraction site, the Contractor shall undertake exploratory test pits on material.

Test pits are to be excavated to the full depth nominated in the relevant resource expansion plan. Samples are to be a blend of material from the full depth of the test pit. A photo is to be taken of each test pit that complies with the photograph requirements in the General Specification for the Contract.

The Contractor shall excavate a minimum of two (2) test pits for each gravel extraction site. For extractions exceeding 10,000 tonnes, the Contractor shall undertake one additional test pit for each subsequent 5,000 tonnes of material planned for extraction.

The minimum testing requirements from each test pit will be as follows:

- 1 x Grading Test
- 1 x Set of Atterberg Tests
- 1 x Soaked CBR test (4 Day Soak)
- Contractor must take three photos of each test pit, clearly showing the pit strata, with full geo-tag metadata for each pit. One photo should show the blended material ready for sample.

The target material properties for pavement construction works (excluding locations where Type 2.3 or Type 2.1 materials are specified) is to conform to DTMR Type 3.5 specification, with an additional requirement of achieving a minimum soaked CBR value of 15. Due to natural variation in source materials, compliance with these requirements may vary between local gravel pits. Where the Contractor's test results indicate that materials from the nominated pit do not meet the specified requirements, the Contractor shall immediately notify the Superintendent and seek Direction prior to proceeding with works.

All NATA **test results** for proposed gravel material shall be submitted to the Superintendent or Superintendents Representative **ten (10) working days prior** to the mining and / or incorporation of the gravel into the Works. If the Contractor proposes to crush and/or screen the material on the basis of the test results obtained, a request to the Superintendent for order of the relevant provisional item should also be made at this time, allowing the Superintendent 10 working days to assess the request.

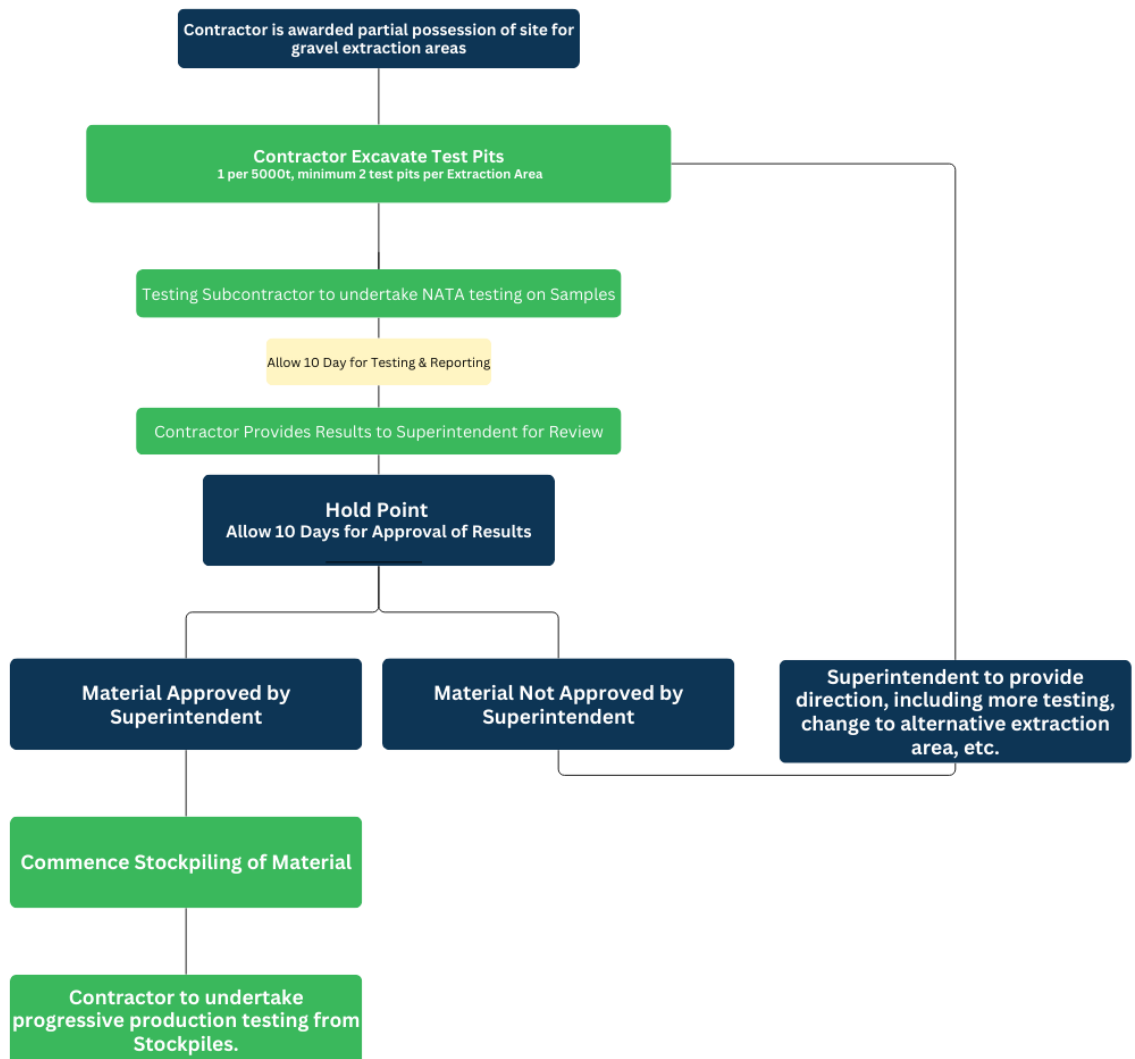
Supply of Test Results at least ten days prior to the mining or incorporation of the gravel into the works is a **HOLD POINT**

The establishment and initial testing process is summarised on the following page.

Contractors should make due allowance for Testing and Approval timeframes when planning the works.

Gravel Supply Process

Process Flow Diagram



Approximate Timeline from PPOS Award to Commence Stockpiling

The following timeline is *approximate and indicative only*, provided as a tool to assist Contractors in planning the early phases of the supply and testing process.

1. Initial site possession and test pit excavation: 1-2 days
2. NATA testing and reporting: approximately 10 days
3. Superintendent review period: 10 working days (**Hold Point**)
4. If approved on first attempt:
 - o Mobilisation and commence stockpiling: 2-3 days

Minimum total for successful first attempt: stockpiling 23-25 days after award of Partial Possession of Site.

However, it is recommended the Contractor allow 30-35+ days total due to:

- Risk of unsuitable material requiring additional testing or alternate extraction areas
- Weather could impact excavation and stockpiling activities in future
- NATA labs often have backlogs that extend beyond the 10-day period
- Coordination between contractor and testing subcontractor can add delays

This timeline assumes no major issues are found with material quality. If material is not approved and alternative areas need to be tested, the process would essentially restart, potentially adding another 15-20 days.

4.2 Gravel Production Requirements

Upon Release of the above hold point, the Contractor may commence stockpiling of the required material, in accordance with the following production requirements.

- a) All pavement material incorporated into the finished pavement shall be free from organic matter, clay lumps and other deleterious material or contamination. Visual inspection of the material before, during and after placement shall be undertaken by the Superintendent or Superintendents Representative to ensure compliance with this clause.
- b) Pavement material shall have a maximum particle size of 37.5mm; or otherwise approved by the Superintendent or Superintendents Representative.
- c) Crushing and/or screening of gravel materials (if ordered by Superintendent) to achieve maximum particle size. Note: The Contractor shall not be entitled to an extension of time under the contract in relation to crushing and/or screening of materials.
- d) The material shall be blended using procedures that:
 - i. are controlled to ensure uniformity of the blended material (including moisture)
 - ii. ensure that the blended material is processed to a well graded, free flowing and consistent state
- e) Sufficient volume is to be stockpiled to allow for wastage, bulking, and exclusion of oversized material which does not meet the material specification.
- f) The Contractor shall undertake Progressive Production Testing from Stockpiles.

The contractor shall undertake remediation activities to disturbed areas within gravel pits upon completion of extraction activities. Remediation Works shall include;

- Stabilise any remaining material stockpiles with an approved soil binder product,
- Regrade all pit slopes to a maximum general gradient of 1:4, with egress points for cattle/wildlife.
- Spread any previously stockpiled topsoil across disturbed areas,
- Pit should hold water for future extraction, unless otherwise directed by the Superintendent,
- Removal of all temporary structures, equipment, and debris from the site.
- Other pit rehabilitation items as ordered / directed by the Superintendent

Final landform must tie in seamlessly with surrounding topography and be suitable for use as grazing

land.

5. Haulage Routes

Water and gravel resources shall be hauled from the specified resource locations to project Sites along the most efficient approved haulage routes available having due regard for delineated resource boundaries, road reserve and Cultural Heritage clearances. The *Contractor* shall manage the haulage routes to ensure they are left in the same or better condition than the condition recorded in the dilapidation survey (refer to General Specification CL13.6) allowing for typical road use in addition to construction traffic. Any damage to the haulage routes should immediately be reported to the Superintendent and repairs shall be undertaken at the Contractor's expense.

The Contractor shall ensure the safety of all pedestrians and vehicular traffic affected by the execution of the WUC, in accordance with Clause 21 of the General Specification. If the Contractor's haulage or associated activities create a safety hazard on any public asset, the Superintendent may issue a Direction to undertake immediate hazard rectification works. Appropriate signage should be installed immediately as a minimum to warn road users of the Hazard. The Contractor must complete any such rectification works as soon as possible, within 72 hours of receiving the Direction. Time taken to complete these repairs is in accordance with clause 10.2 of the General Specification.

Only the nominated approved access routes, access points and road turnarounds shall be used, with every other location being a No-Go zone.

Establishment and maintenance of the access tracks, set out in the resource sketches, (water sources, gravel pits, turnarounds) is the responsibility of the *Contractor* and must be allowed for in the pricing submitted. Access tracks must be left in a trafficable condition free of bulldust, scours and ruts upon completion of the Contract and is the responsibility of the Contractor to allow for costs in the pricing submitted.

The Principal shall not be liable for costs associated with the management, maintenance, or restoration of these approved haulage routes.

6. Supplementary Work Items

In accordance with the provisions of Clause 2 of MRS01 *Introduction to Specifications*, the Supplementary Work Items covered by this Specification are listed in Table 2.

Testing requirements for Supplementary Work Items are outlined on the "PAVEMENT TESTING" drawing supplied.

Table 2: Supplementary Work Items

Reference	Treatment / Work Items	Unit
USP_MFG	Medium formation grading	m
USP_HFG	Heavy formation grading	m
USP_HFG50	Heavy formation grading incorporating 50mm of imported material	m3
USP_HFG75	Heavy formation grading incorporating 75mm of imported material	m3
USP_GR100	Gravel Re-sheeting 100mm	m3
USP_GR150	Gravel Re-sheeting 150mm	m3
USP_GMS	Gravel/material supply	m3
USP_RSTD	Reshape table drain (1 side)	m
SPR_STB	In-situ stabilisation - including 50mm corrector. Excludes seal	m2
SPR_RR	Reconstruct unbound granular pavement. Excludes seal	m2
SPR_RB	Reconstruct unbound granular base. Excludes seal	m2
SPR_PRL	Pavement repair (Patch Repair) - patch unbound pavement failure. Includes 2 coat bitumen seal	m2

SPR_POT	Pothole repair	each
SPR_PER	Edge Repair	m
SPR_HSG	Heavy shoulder grading - incorporating 50mm of imported material	m
SPR_RSSR	Bitumen spray seal, 2-coat	m2
EXC_HVC	Clear mixed debris and remove from site	m3
EXC_RSOS	Bulk excavate surplus material and remove from site	m3
BKF_IMP	Bulk fill - imported	m3
CON_RFC	Repair with flowable concrete	m3
CUL_SIL	Desilt drainage structure - removal of silt and debris	m3
CUL_RHW	Replace head/end wall (pipe or RCBC)	unit
RK_RKP	Rock protection	m3
RK_MAT	Construct rock mattress	m3
RFD_RP	Replace guide posts or markers	each
RFD_RCS	Replace sign (complete) - standard road sign, includes post	each

6.1 Medium formation grading (USP_MFG)

Work items shall comply with *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and Reinststate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Scarify / Tyne 50mm of existing roadway surface
- Recovery of suitable material from table drains
- Clearing and grubbing to remove vegetation between the top hinge points of each table drain where the table drain batter intersects natural surface
- Blade mix reclaimed suitable material from table drains, moisture correct blended gravel, shape in accordance with design, compact and trim road pavement
- Clean and reshape table drains and compact loose material
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Where a surface treatment traverses a sag in the road vertical geometry, the pavement profile must maintain crossfall in the invert to allow flow
- No water shall pond on the surface. The graded surface shall be watered and rolled to provide a sound tight surface with minimal loose stones and no visible vertical movement when proof rolled.
- The finished surface of the pavement shall:
 - a) achieve an appropriate wearing surface for the pavement through use of water and a rubber tyred or smooth drum roller
 - b) have the correct geometry nominated in the Drawings.
 - c) Achieve satisfactory Proof Roll per PAVEMENT TESTING Drawings

6.2 Heavy formation grading (No gravel) (USP_HFG)

Work items shall comply with *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and Reinststate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Scarify / Tyne of up to 100mm or 150mm (if required due to rutting) of existing roadway surface
- Recovery of suitable material from table drains

- Clearing and grubbing to remove vegetation between the top hinge points of each table drain and where the table drain batter intersects natural surface
- Blade mix reclaimed suitable material from table drains and moisture correct blended gravel, shape in accordance with design, compact and trim road pavement
- Clean and reshape Table Drains and compact loose material
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Where a surface treatment traverses a sag in the road vertical geometry, the pavement profile must maintain crossfall in the invert to allow flow
- No water shall pond on the surface. The graded surface shall be watered and rolled to provide a sound tight surface with minimal loose stones and no visible vertical movement when proof rolled.
- The finished surface of the pavement shall:
 - a) achieve an appropriate wearing surface for the pavement through use of water and a rubber tyred or smooth drum roller
 - b) have the correct geometry nominated in the Drawings.
 - c) Achieve satisfactory Proof Roll per PAVEMENT TESTING Drawings

6.3 Heavy formation grading (50mm gravel) (USP_HFG50)

Work items shall comply with *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Scarify / Tyne of up to 100mm or 150mm (if required due to rutting) of existing roadway surface
- Recovery of suitable material from table drains
- Clearing and grubbing to remove vegetation between the top hinge points of each table drain where the table drain batter intersects natural surface.
- Blade mix - reclaimed suitable material from table drains and incorporate additional 50mm imported gravel, moisture correct blended gravel, shape in accordance with design, compact and trim road pavement
- Clean and reshape Table Drains and compact loose material
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Where a surface treatment traverses a sag in the road vertical geometry, the pavement profile must maintain crossfall in the invert to allow flow
- No water shall pond on the surface. The graded surface shall be watered and rolled to provide a sound tight surface with minimal loose stones and no visible vertical movement when proof rolled.
- The finished surface of the pavement shall:
 - a) achieve an appropriate wearing surface for the pavement through use of water and a rubber tyred or smooth drum roller
 - b) have the correct geometry nominated in the Drawings.
 - c) Achieve satisfactory Proof Roll per PAVEMENT TESTING Drawings

6.4 Heavy formation grading (75mm gravel) (USP_HFG75)

Work items shall comply with *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Scarify / Tyne of up to 100mm or 150mm (if required due to rutting) of existing roadway

surface

- Recovery of suitable material from table drains
- Clearing and grubbing to remove vegetation between the top hinge points of each table drain where the table drain batter intersects natural surface
- Blade mix - reclaimed suitable material from table drains and incorporate additional 75mm imported gravel, moisture correct blended gravel, shape in accordance with design, compact and trim road pavement
- Clean and reshape Table Drains and compact loose material
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Where a surface treatment traverses a sag in the road vertical geometry, the pavement profile must maintain crossfall in the invert to allow flow
- No water shall pond on the surface. The graded surface shall be watered and rolled to provide a sound tight surface with minimal loose stones and no visible vertical movement when proof rolled.
- The finished surface of the pavement shall:
 - a) achieve an appropriate wearing surface for the pavement through use of water and a rubber tyred or smooth drum roller
 - b) have the correct geometry nominated in the Drawings.
 - c) Achieve satisfactory Proof Roll per PAVEMENT TESTING Drawings

6.5 Gravel Re-sheeting incorporating 100mm of imported material (USP_GR100)

Work items shall comply with *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Scarify / Tyne of up to 100mm or 150mm (if required due to rutting) of existing roadway surface
- Recovery of suitable material from table drains
- Clearing and grubbing to remove vegetation between the top hinge points of each table drain where the table drain batter intersects natural surface
- Blade mix reclaimed suitable material from table drains and moisture correct blended gravel, shape in accordance with design, compact and trim road pavement
- The existing formation material shall be shaped to form a surface parallel to the planned finished surface of the shoulder. This surface shall be wide enough to enable the completed formation to conform to the cross-section shape specified
- Spread 100mm of imported material, moisture condition, shape in accordance with design, compact and trim road pavement
- Clean and reshape Table Drains and compact loose material
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Where a surface treatment traverses a sag in the road vertical geometry, the pavement profile must maintain crossfall in the invert to allow flow
- No water shall pond on the surface. The graded surface shall be watered and rolled to provide a sound tight surface with minimal loose stones and no visible vertical movement when proof rolled.
- Undertake testing in accordance with the PAVEMENT TESTING Drawings
- The finished surface of the pavement shall:
 - a) achieve an appropriate wearing surface for the pavement through use of water and a rubber tyred or smooth drum roller
 - b) have the correct geometry nominated in the Drawings.
 - c) Achieve satisfactory Proof Roll per PAVEMENT TESTING Drawings

6.6 Gravel Re-sheeting incorporating 150mm of imported material (USP_GR150)

Work items shall comply with *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Scarify / Tyne of up to 100mm or 150mm (if required due to rutting) of existing roadway surface
- Recovery of suitable material from table drains
- Clearing and grubbing to remove vegetation between the top hinge points of each table drain where the table drain batter intersects natural surface
- Blade mix reclaimed suitable material from table drains and moisture correct blended gravel, shape in accordance with design, compact and trim road pavement
- The existing formation material shall be shaped to form a surface parallel to the planned finished surface of the shoulder. This surface shall be wide enough to enable the completed formation to conform to the cross-section shape specified
- Spread 150mm of imported material, moisture condition, shape in accordance with design, compact and trim road pavement
- Clean and reshape Table Drains and compact loose material
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Where a surface treatment traverses a sag in the road vertical geometry, the pavement profile must maintain crossfall in the invert to allow flow
- No water shall pond on the surface. The graded surface shall be watered and rolled to provide a sound tight surface with minimal loose stones and no visible vertical movement when proof rolled.
- Undertake testing in accordance with the PAVEMENT TESTING Drawings
- The finished surface of the pavement shall:
 - a) achieve an appropriate wearing surface for the pavement through use of water and a rubber tyred or smooth drum roller
 - b) have the correct geometry nominated in the Drawings.
 - c) Achieve satisfactory Proof Roll per PAVEMENT TESTING Drawings

6.7 Reshape table drain (1 side) (USP_RSTD)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.,
- Table drain outlets shall be reinstated in the existing position. New table drain outlets are to be constructed where the distance between outlets exceeds 500m
- Cleaning and reshaping of existing surface drains adjacent the road formation (allowance for one drain only). Ensure any loose material is compacted to resist future erosion.
- Shape table drain to ensure it is free draining and outlets/spur drains are either reinstated or constructed. If trees are required to be removed prior approval shall be obtained. The interface from the table drain to the surrounding topography shall be free from any rills. Finish to leave smooth, tight surface.

6.8 In-situ stabilisation - including 50mm corrector. Excludes seal (SPR_STB)

Work items shall comply with *MRTS07B In-situ Stabilised Pavements using Cement or Cementitious Blends*. Work operations incorporated in this item includes (but is not limited to) the following:

- Removal of material not suitable for stabilisation

- Import and spreading of unbound granular material to replace unsuitable and for shape- correction (50mm)
- Pulverisation
- Supply and spreading of stabilising agents
- Stabilisation and moisture correction
- Compaction, trimming and curing

6.9 Reconstruct unbound granular pavement. Excludes seal (SPR_RR)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Removal of failed pavement material, reasonable allowance for replacement of unsuitable, compaction of subgrade, import and placement of unbound granular material in layers to match adjoining

6.10 Reconstruct unbound granular base. Excludes seal (SPR_RB)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Removal of failed pavement material, reasonable allowance for replacement of unsuitable, compaction of subgrade, import and placement of unbound granular material to match adjoining

6.11 Pavement repair - patch unbound pavement failure. Includes 2 coat seal (SPR_PRL)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- This treatment is referenced in the Form 4 as "Patch Repair"
- Removal of failed pavement material
- Reasonable allowance for replacement of unsuitable
- Compaction of subgrade
- Import and placement, compaction and trimming of unbound granular material in layers to match adjoining
- 2-coat bitumen seal.

6.12 Pothole repair (SPR_POT)

- Removal of water and debris
- Cut back to sound pavement and squaring of sides
- Apply Emulsion tack coat
- Fill with asphalt-mix or cold mix in accordance with manufacturer's specifications and compact to match adjacent road surface.
- The finished surface shall be within ± 5 mm of the height of and conform to the shape of the surrounding road surface
- The standard of compaction shall be such that the final passes of the compaction equipment leave no impressions on the restored surface
- No loose material shall be left on the sealed road

6.13 Heavy shoulder grading - incorporating 50mm of imported material (SPR_HSG)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and reinstate (once work item is complete) road furniture e.g., guide posts, signs, etc.
- Reinstatement of formation and profile
- Recovery of material from adjacent table drains where appropriate
- Tyne <100mm depth
- Incorporation of additional 50mm unbound pavement
- Trimming, compacting, trimming, and brooming of adjacent sealed surface.
- At the sealed/unsealed interface, the finished unsealed surface shall be even and within +0mm/-10mm of the height of the adjacent seal
- Shoulder crossfall shall be within 0%/-2% when compared to the crossfall of the adjacent seal
- The width of the finished unsealed shoulder shall be consistent and within -100mm of 1m or greater than 1m

6.14 Bitumen spray seal, 2-coat (SPR_RSSR)

Work items shall comply with *MRTS11 Sprayed Bituminous Treatments (Excluding Emulsion)*. Work operations incorporated in this item includes (but is not limited to) the following:

- Seal design to be as specified in the Form 4 or as advised by the Superintendent
- Preparation of the existing surface, sweeping, patching and shape correction if required
- Supply (1st coat primer seal), cart, heat spraying of bitumen seal (including cutter and additive agent), spread pre-coated stone and roll appropriately
- Supply (2nd coat seal), cart, heat, spray bitumen (including cutter if required and adhesive agent) spreading precoated stone and roll appropriately
- line spotting as required
- Includes allowance for lapping of seal with existing.

6.15 Clear mixed debris and remove from site (EXC_HVC)

- Clearing of mixed debris material, loading and removal from site and dumping at a licensed facility or specified borrow pit.

6.16 Bulk excavate surplus material and remove from site (EXC_RSOS)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Excavation of surplus material, loading and removal from site (ESC_RSOS) and stockpiling at a nominated location

6.17 Bulk fill – imported (BKF_IMP)

Work items shall comply with *MRTS04 Earthworks* and *MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Sourcing and cartage of bulk fill material
- Preparation of underlying material
- Placement, incorporation of moisture (where required) and compaction.

6.18 Repair with flowable concrete (CON_RFC)

- Supply, transport, pouring/pumping of flowable concrete to fill voids

6.19 Desilt drainage structure - removal of silt and debris (CUL_SIL)

- Cleaning or flushing of blocked culverts from debris or silt by hand tools, water pressure blasting or pull-back/pull-through system.

6.20 Replace head/end wall (pipe or RCBC) (CUL_RHW)

Work items shall comply with *MRTS03 Drainage Structures, Retaining Structures and Embankment Slope Protections*. Work operations incorporated in this item includes (but is not limited to) the following:

- Remove and dispose of existing end structure
- Prepare base
- Supply and install OR construct end structure
- Backfill with suitable material.

6.21 Rock protection (RK_RKP)

Work items shall comply with *MRTS03 Drainage Structures, Retaining Structures and Embankment Slope Protections*. Work operations incorporated in this item includes (but is not limited to) the following:

- Preparation of work area
- Placement of geotextile (where required)
- Recovery of displaced rock
- Supply of rock material, as required
- Placement of bulk rock, minimum 300mm diameter.

6.22 Construct rock gabion mattress (RK_MAT)

Work items shall comply with *MRTS03 Drainage Structures, Retaining Structures and Embankment Slope Protections*. Work operations incorporated in this item includes (but is not limited to) the following:

- This treatment is referenced in the Form 4 as “Construct rock mattress”
- Preparation of the work area,
- Placement of geotextile (where required),
- Supply and installation of cages
- Recovery of displaced rock,
- Supply of additional rock as needed (*Provisional Item*),
- Filling and wiring of cages.

6.23 Replace guide posts or markers (RFD_RP)

Work items shall comply with *MRTS14 Road Furniture*. Work operations incorporated in this item includes (but not limited to) the following:

- Replace guide posts or markers.

6.24 Replace sign (complete) - standard road sign, includes post (RFD_RCS)

Work items shall comply with *MRTS14 Road Furniture*. Work operations incorporated in this item includes (but is not limited to) the following:

- Replace sign (complete) - standard road sign, includes post.

6.24 Edge Repair (SPR_PER)

- Supply and application of tack coat
- Supply, application and compaction of asphalt or premix

6.25 Gravel/Material Supply (USP_GMS)

Work items shall comply with *MRTS04 Earthworks and MRTS05 unbound pavements*. Work operations incorporated in this item includes (but is not limited to) the following:

- Sourcing and cartage of gravel
- Preparation of underlying material
- Placement in maximum 200mm layers, incorporation of moisture (where required) and compaction.
- Compaction tests