

SECTION 428 - SURFACE RETEXTURING USING HIGH PRESSURE WATER

##This section cross-references Section 175.

If Section 175 is relevant, it should be included in the specification.

If Section 175 is not included in the specification, all references to it should be struck out, ensuring that the remaining text is still coherent:

428.01 GENERAL

This section covers the requirements for use of high pressure water to:

- improve surface texture of bituminous surfaced roads by removing slick, flushed areas;
- remove unwanted materials such as petrol, oil, grease, lichen, and other grime from road surfaces.

428.02 DEFINITIONS

Aggregate Retention

Retention of aggregate particles by the binder under normal traffic conditions. The degree of aggregate stripping is measured to assess aggregate retention.

Binder

Binder is the material used to hold a mixture of aggregates together as a cohesive mass on the road surface.

Retexturing

Removal of excess binder to improve the texture of the road surface, with an aim of providing a binder level of 1/2 to 2/3 of the height of the aggregate, as is the case for a well textured surface.

Sprayed Seal

The sprayed application of bituminous binder to a pavement surface followed by an application of aggregate to form an all weather skid resistant road surfacing.

Surface Texture

The mean height of aggregate particles above the level of the binder as determined by the VicRoads' test for surface texture testing as listed in Standard Section 175.

428.03 PLANT AND EQUIPMENT

The retexturing and surface cleaning machine shall consist of a self contained system which uses high pressure water jets to:

- dislodge/remove excess binder from the road surface;
- remove unwanted materials from the road surface.

The equipment shall incorporate a suction system to uplift all of the dislodged particles of binder or other materials being removed and all sprayed water. The equipment shall meet all requirements of AS 4233, High Pressure Water (hydro) Jetting Systems.

428.04 WATER SUPPLY

The Contractor shall supply all water for the High Pressure Water Retexturing process, and shall ensure that all permits/licenses are obtained and any associated charges have been paid to the appropriate authority.

Proof of permits/approvals shall be submitted to the Superintendent prior to the obtaining any water from local streams, channels or dams. A record shall be kept of the quantity of water obtained from these sources.

No additional payment shall be made for meeting this requirement. All associated costs for meeting this requirement shall be included in the contract sum.

428.05 ACCEPTANCE OF WORK

(a) Surface Texture

Acceptance of work for retexturing shall be based on visual assessment. In marginal cases, the Superintendent may request that nominated areas be tested in accordance with the relevant Test Method for assessment in accordance with Table 428.051. The test lot size shall not be more than 600 m of single traffic lane, or 1000 m² for other areas.

Table 428.051 - Test Requirements for Minimum Surface Texture

Treatment	Average Texture Depth (mm) as per VicRoads Test Method for each aggregate size			Action Required
	Size 5 & 7	Size 10	Size 14	
Sprayed Seals (All Types)	> 0.9	> 1.2	> 1.3	Accept
	0.6 to 0.9	0.8 to 1.2	1.0 to 1.3	Rectify or reduce payment for the lot by \$0.50 / m ²
	< 0.6	< 0.8	< 1.0	Work to be rectified

(b) Aggregate Retention

Acceptance of work for aggregate retention shall be based on visual assessment. In marginal cases the Superintendent may request that nominated areas be tested in accordance with the relevant Test Method for aggregate stripping for assessment in accordance with Table 428.052. Depending on the measured Degree of Aggregate Stripping, the Contractor shall take action as specified in Table 428.052. For any testing undertaken, the maximum lot size shall be not be more than 1000 m².

Table 428.052 - Assessment of Aggregate Retention

Degree of Aggregate Stripping	Action Required
0 to 2	Accept
3 to 5	Work to be retested within one month prior to the end of the Defects Liability Period. If the Degree of Aggregate Stripping has increased since it was last tested, the work shall be rectified before the end of the Defects Liability Period.
Greater than 5	Work shall be rectified within 5 days.

(c) Areas Exempt from Testing

Areas exempt from testing requirements are noted in Table 428.121 (Schedule of Details).

In addition to any areas noted in the above table as being exempt from testing requirements, the Contractor may seek approval from the Superintendent to exempt further areas from testing requirements. Areas that may be considered include gritted areas, asphalt surfaces, and distressed areas. In these cases a visual assessment of the improved surface condition shall be undertaken.

428.06 WASTE MANAGEMENT

(a) Liquid Waste

Liquid waste generated from this process shall be disposed of to a treatment plant registered by the Environment Protection Authority to accept the type of waste generated.

(b) Solid Waste

Solid waste shall be disposed of to a waste facility licensed to accept the type of waste material generated.

The Contractor may request to leave the solid waste at a site approved by the Superintendent for a period of not more than 1 week, prior to moving the waste to a licensed waste facility. If waste is to be left at an approved site (other than a licensed waste facility) for any period of time, the waste must be contained to the site where it was placed, with appropriate bunding used.

428.07 LIMIT OF WORK

The limits of work at the start and finish chainages and any individual areas within these limits have been marked on the pavement surface. These are described in Table 428.121.

The Superintendent may increase or decrease the limits of work listed in the Schedules. The Contractor will be notified in writing prior to works commencing on job items, of such adjustments to the limits of work and the Contract sum adjusted on a pro-rata basis using the Item price tendered in the Schedules.

Where the change in the limits of work results in a net change of the item price by greater than 10%, the amount in excess of 10% will be treated as a variation under Clause 40 of the General Conditions of Contract.

428.08 INCLUSION AND DELETION OF JOB ITEMS

The Superintendent may cancel any work, subject to notice of cancellation being given 1 week prior to the proposed commencement date.

The Contractor will be notified in writing of such deletion and the Contract sum adjusted by the price tendered in the Schedules for the job item/s deleted.

No additional payment will be made as a result of the deletion of any job item. However, where the deletion of job items results in a contract sum reduction of more than 20% of the original contract sum, the deletion of job items in excess of this amount will be treated as a variation under Clause 40 of the General Conditions of Contract.

The Superintendent may request the Contractor to undertake additional surface cleaning or retexturing works at sites not listed in the Schedules. These works will be treated as a variation under Clause 40 of the General Conditions of Contract.

428.09 DAMAGED PAVEMENT AREAS CAUSED BY CONTRACTED WORKS

The Contractor shall be responsible for all repairs to any damaged pavement areas caused as a result of these works. Damage includes areas such as those of excessive texture depth, loss of aggregate, and loss of surfacing.

The Contractor shall immediately advise the Superintendent of any damage caused, and the nature of the damage.

Before treating any damaged areas the Contractor shall have advised the Superintendent of the remedial works proposed, and have obtained the Superintendent's approval to those works.

428.10 RECORDS

The Contractor shall complete, and forward to the Superintendent, a Job Completion Report (Sealing) using the proforma included as Attachment A to this Section 428 (also available electronically in Microsoft Word and Excel format from the Standard Documents page of the VicRoads website), or an equivalent proforma as approved by the Superintendent, for each job item in the Schedules. The completed form shall be submitted within seven days of completion of each surface cleaning or retexturing job.

The Contractor shall show and certify by initialling each item on the above Job Completion Report the actual status of the item compared to the specified requirement for that item, and sign and date the report prior to forwarding to the Superintendent.

The Contractor shall ensure that where a representative of the Superintendent is on site during the works, that officer validates the works as provided on the Job Completion Report.

A Job Completion Report shall also be completed for any repair works to damaged areas.

428.11 ACCURACY OF QUANTITIES

The total area of each job item in Table 428.121 is accurate to 2.5%. No additional payment or deduction will be made where the measured total treated area of each job falls within $\pm 2.5\%$ of the listed area.

428.12 SCHEDULE OF DETAILS**Table 428.121 - Schedule of Details**

Item (refer Sch 1)	Freeway, Highway or Road Name			Chainage	Approximate Length (m)	Approximate Width (m)	Approximate Area (m ²)	Treat ment Type (²)	Aggregate Sizes (mm)	Other Requirements (³)
		Road & Link No.	Map & Ref (¹)							
##Note to author - The following items are examples only. Change text to suit your specification. DELETE THIS ROW BEFORE PRINTING:										
1	Birchip-Rainbow Road	5162	18- D8	7.00- 7.50	500	5.0	2500	RX		
2	Western Highway	2520	57- G8							
2.1	Lane 1 (left lane)			162.3- 162.35	50	3.7	185	SC	14/7	Remove oil from surface
2.2	Lane 2 (middle lane)			161.0- 162.0	1000	2.4	2400	RX	14	
2.3	Lane 3 (right lane)			161.0- 162.0	Various	Various	500	RX	10	Various patches in wheel paths, as marked
2.4	Shoulders (both sides)			161.0- 162.0	1000	2 x 1.5	3000	SC	7	Remove lichen from shoulders. Exempt from Minimum Surface Texture Requirement.

Table 428.121 - Schedule of Details

Item (refer Sch 1)	Freeway, Highway or Road Name			Chainage	Approximate Length (m)	Approximate Width (m)	Approximate Area (m ²)	Treat ment Type (²)	Aggregate Sizes (mm)	Other Requirements (³)
		Road & Link No.	Map & Ref (¹)							
3	Mallee Highway (west bound)	2650	9-B5	120-121	Varies	1.0	850	RX	10	Various patches in wheel paths, generally 1 m wide, and mainly in outer wheel path. Exempt from Minimum Surface Texture Requirements as surface has been extensively gritted.

If any space is left blank it shall be read as "Not Applicable".

Notes on Table 428.121

(2) Treatment Type – Surface Cleaning (SC), Retexturing (RX).

(3) Typical "Other Requirements" include: special restrictions on timing of works, exempt areas, type of material to be removed from surface.

JOB COMPLETION REPORT (SEALING)

CONTRACT No.

JOB SPECIFICS	
Job No: _____	Treatment: _____
Road Name: _____	Seal Date: _____
Start Chainage: _____	Stacksite Location: _____
End Chainage: _____	

EXISTING CONDITIONS (circle or fill in)						
Weather:	Sunny	Clear	O'Cast	Windy	Showers	Wet
Air Temp:			Pavement Temp:			
Pavement:	Isolated stone loss	stripping	flushed wheel paths	flushed	patching	cracking
Regulatory Speed Limit:	100 km	80 km	60 km	40 km	< 40 km	other
Aggregate Conditions:	clean	dry	dusty	dirty	damp	wet
Aggregate Pre-coat:	pre-delivery	onsite	no pre-coat			
NCR Required?	Yes	No	Reasons:			NCR No:

TRAFFIC CONTROL (circle or fill in)	
Subcontractor Managing Traffic Control?	Yes / No
Subcontractor:	Subcontractor Initials:

SIGNS					
During Work	Installed to WTM Code	Yes / No	Date / Time Installed:	Speed Limit	km/hr
	Removed	Yes / No	Date / Time Removed:	TMP No. Used	
After Work	Installed to WTM Code	Yes / No	Date / Time Installed:	Speed Limit	km/hr
	Removed	Yes / No	Date / Time Removed:	TMP No. Used	
Traffic	Delays	Average Delay to Vehicles: _____ minutes			
	Queues	Average Queue Length: _____ vehicles			

SEALING WORKS						
RUN NO.	Pre-treatment / Run 1	Run 2	Run 3	Run 4	Run 5	Totals
Start Chainage						
End Chainage						
Lane Description						
Air Temperature						
Pavement Temperature						
Length (m)						
Width (m)						
Area (m ²)						
Binder Type						
Tank Dip Start (litres)						
Tank Dip End (litres)						
Quantity Sprayed (litres)						
Actual Application Rate (l/m ²)						Average
Design Application Rate (l/m ²)						Average
Mix - Bitumen/Flux Oil/Cutter/Additive	100 / / /	100 / / /	100 / / /	100 / / /	100 / / /	

AGGREGATE						
Aggregate Size						
Quantity (m ³)						
Average Least Dimension (ALD)						
Aggregate Design Spread Rate (m ² /m ³)	/ ALD	/ ALD	/ ALD	/ ALD	/ ALD	
Actual Design Spread Rate (m ² /m ³)	/ ALD	/ ALD	/ ALD	/ ALD	/ ALD	
Rolling Time (hrs)						

DELINEATION	Existing RRPMS	Removed	Yes / No	Date:	
	TRRPMs	Installed	Yes / No	Date:	
		Uncovered	Yes / No	Date:	Spacings: _____ m
	Reinstatement	Pavement Markings - 1 st Coat		Specified Date Due:	
		Pavement Markings - 2 nd Coat		Actual Date Done:	
	RRPMS			Specified Date Due:	
				Actual Date Done:	
Weather Delays to Linemarking: _____ days			Actual Date Done:		

I, certify the above details as correct
 (Contractor's Representative, print name)

..... / /
 (Contractor's Representative, signed)

I, concur with the above
 (Superintendent's Representative, print name)

..... / /
 (Superintendent's Representative, signed)