

INTERIM ADVICE NOTE 156/16

Revision of Permitted Surface Course Options and Aggregate Specification for Pavement Surfacing

Summary

This IAN replaces IAN 156/12 and revises the requirements in HD36/06 for permitted surfacing types and aggregate polished stone values.

Instructions for Use

This IAN shall be implemented in accordance with the implementation instructions given at CI 1.3 of this document.

1. Introduction

This IAN provides updated advice on the selection road surface course type and of polished stone value (PSV) of aggregates used in pavement surfacing.

The environmental impact of noise generated by traffic is a major consideration in the design and implementation of engineered solutions for the construction and maintenance of the strategic road network in England. Recognition of the contribution of the type of surface course to the generation of tyre/road surface noise has, therefore, been a limiting factor on the range of permitted surface course materials. Updated advice recognizes that there may be situations where, subject to certain site specific conditions and constraints, a wider range of surfacing types can be permitted without restriction.

Research has shown that the frictional properties of thin surface course systems (TSCS) incorporating aggregates with a nominal size of 10mm or less are better than those for larger sized aggregates.

1.1 Purpose

It is anticipated that the introduction of this IAN should deliver cost savings by allowing designers to select the most appropriate surface course option without the requirement for a Departure from Standards, provided certain site specific conditions and constraints are fulfilled. Well designed and installed hot rolled asphalt (HRA) surface course has been shown to offer potentially long service lives, which can be beneficial in terms of whole life value. Cold applied ultra-thin surfacings (CAUTS) offer a low cost means of restoring surface characteristics and/or sealing an existing surface to extend useful service life.

It is also anticipated that this IAN will deliver cost savings by reducing haulage distances for premium aggregates, without increasing risk for the road user. By matching specifications more closely to the geology of sources available in the UK the sustainability of road construction should also be enhanced by reducing the consumption of scarce premium aggregate. This IAN also limits the use of larger nominal aggregate size surfacings in high stress locations. Use of smaller nominal size aggregates has been shown to improve durability of TSCS at high stress sites.

1.2 Relationship

This IAN revises specific requirements and guidance within HD 36/06. It must be read in conjunction with HD 36/06.

1.3 Implementation

This IAN shall be implemented immediately except where the procurement of works, at any stage from conception through design to completion of construction, has reached a stage at which, in the opinion of Highways England, use of this document would result in significant additional expense or delay progress (in which case the decision must be recorded in accordance with the Highways England's procedures).

1.4 Mutual Recognition

Any reference in this specification to a “British Standard”, or to a “British Standard which is an adopted European Standard”, is to be taken to include reference also to the following standards:

- (a) a standard or code of practice of a national standards body or equivalent body of any EEA state or Turkey;
- (b) any international standard recognised for use as a standard or code of practice by any EEA state or Turkey;
- (c) a technical specification recognised for use as a standard by a public authority of any EEA state or Turkey; and
- (d) a European Technical Approval (ETA) issued in accordance with the procedure set out in directive 89/106/EEC.

Where there is a requirement in this specification for compliance with any part of a British Standard or a British Standard which is an adopted European Standard, that requirement may be met by compliance with any of the standards given above, provided that the relevant standard imposes an equivalent level of performance and safety provided for by a British Standard or a British Standard which is an adopted European Standard.

“EEA State” means a state which is a contracting party to the EEA Agreement.

“EEA Agreement” means the agreement on a European Economic Area signed at Oporto on the 2nd of May 1992 as adjusted or amended.

2. Requirements

This IAN shall be read in conjunction with Design Manual for Roads and Bridges document HD 36/06. The new and revised requirements and guidance given in Annex A of this IAN shall be applied in place HD36/06 Paragraphs 2.1, 2.2, 2.4, Table 2.2 (E), (W), (S) and (NI), 2.8, 3.11, 3.12 and 3.16 and Table 3.1.

3. Withdrawal Conditions

This IAN will remain current until these requirements are either included in, or revised by, a subsequent document issued by the Highways England.

4. Contacts

For queries regarding this IAN please contact:

Email: standards_enquiries@highways.gsi.gov.uk

5. Normative References

The Design Manual for Roads and Bridges, Volume 7 – HD 36/06 The Design Manual for Roads and Bridges, Volume 7 – HD 28/15

The Design Manual for Roads and Bridges, Volume 11 – HD 213/11

Manual of Contract Documents for Highway Works, Volume 1 900 Series - Road Pavements - Bituminous Bound Materials

Manual of Contract Documents for Highway Works, Volume 2 900 Series - Road Pavements - Bituminous Bound Materials

England's Noise Action Plans, DEFRA, 2010

6. Informative References

Roe, P G. and Dunford A, "The skid resistance behaviour of thin surface course systems", TRL report PPR564

Appendix A

Revised Paragraph 3.11

The minimum PSVs that must be specified for different categories of site and traffic flow are given in Table 3.1a or Table 3.1b. The AAVs that must be specified are given in Table 3.2.

Tables 3.1a, 3.1b and 3.2 refer to both new works and maintenance and values of PSV and AAV must be inserted into the appropriate part of Appendix 7/1 of the Specification (MCHW1).

The minimum values of PSV given in Table 3.1a or Table 3.1b are the values to be used unless other evidence in the form of objective data is available. On an existing site, if the life that has been achieved by the aggregates, the skid resistance and the skidding accident rate has been satisfactory, then the continued use of the same aggregate source, albeit with a lower PSV than that given in Table 3.1a or 3.1b may be considered. If, however, the measured skid resistance of the site when related to the life achieved and the skidding accident rate are below expectations for an aggregate from a particular source, then a higher PSV than that given in Table 3.1a or 3.1b may be specified.

New Paragraph 3.11a

Where a thin surfacing system is used on the circulatory part of a roundabout or other gyratory junction, a maximum nominal aggregate size of 10mm must be used in the surfacing, as research has demonstrated that it will provide greater durability.

High friction surfacing should not normally be used on roundabouts even if traffic light controlled.

Revised Paragraph 3.12

Although some motorways carry in excess of 6000 commercial vehicles per lane per day, PSVs in excess of those shown in Table 3.1a or 3.1b must not be specified. Although minimum PSV values have been included for all types of site and traffic level, some combinations are unlikely to occur in practice.

Revised Paragraph 3.16

For new construction, the same levels of PSV and AAV must be used on different traffic lanes across the carriageway and in the hardshoulder except that, where aggregates are used for demarcation, a maximum difference of 5 PSV points may be allowed.

Where an existing surfacing is being replaced for maintenance purposes, the appropriate PSV and AAV must be selected from Tables 3.1a, 3.1b and 3.2.

Site category	Site description	IL	Minimum PSV required for given IL, traffic level and type of site									
			Traffic (cv/lane/day) at design life									
			0-250	251- 500	501- 750	751- 1000	1001- 2000	2001- 3000	3001- 4000	4001- 5000	5001- 6000	Over 6000
A1	Motorways where traffic is generally free-flowing on a relatively straight line	0.30	50	50	50	50	50	55	55	60	65	65
		0.35	50	50	50	50	50	60	60	60	65	65
A2	Motorways where some braking regularly occurs	0.35	50	50	50	55	55	60	60	65	65	65
B1	Dual carriageways where traffic is generally free-flowing on a relatively straight line	0.30	50	50	50	50	50	55	55	60	65	65
		0.35	50	50	50	50	50	60	60	60	65	65
		0.40	50	50	50	55	60	65	65	65	65	68+
B2	Dual carriageways where some braking regularly occurs	0.35	50	50	50	55	55	60	60	65	65	65
		0.40	55	60	60	65	65	68+	68+	68+	68+	68+
C	Single carriageways where traffic is generally free-flowing on a relatively straight line	0.35	50	50	50	55	55	60	60	65	65	65
		0.40	55	60	60	65	65	68+	68+	68+	68+	68+
		0.45	60	60	65	65	68+	68+	68+	68+	68+	68+
G1/G2	Gradients >5% longer than 50m as per HD 28	0.45	55	60	60	65	65	68+	68+	68+	68+	68+
		0.50	60	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS
		0.55	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS
K	Approaches to pedestrian crossings and other high risk situations	0.50	65	65	65	68+	68+	68+	HFS	HFS	HFS	HFS
		0.55	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS
Q	Approaches to major and minor junctions on dual carriageways and single carriageways where frequent or sudden braking occurs but in a generally straight line	0.45	60	65	65	68+	68+	68+	68+	68+	68+	HFS
		0.50	65	65	65	68+	68+	68+	HFS	HFS	HFS	HFS
		0.55	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS
R	Roundabout circulation areas	0.45	50	55	60	60	65	65	68+	68+	68+	68+
		0.50	68+	68+	68+	68+	68+	68+	68+	68+	68+	68+
S1/S2	Bends (radius <500m) on all types of road, including motorway link roads; other hazards that require combined braking and cornering	0.45	50	55	60	60	65	65	68+	68+	HFS	HFS
		0.50	68+	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS
		0.55	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS

Table 3.1a: Minimum PSV for chippings or coarse aggregate in bituminous surfacings (excluding hot applied thin surface course systems).

Notes:

1. Site categories are grouped according to their general character and traffic behaviour. The Investigatory Levels (IL) for specific categories of site are defined in HD 28 (DMRB 7.3.1). The IL to be used here must be that which has been allocated to the specific site on which the material is to be laid, as determined by following the procedures in HD 28.
2. Motorway or dual carriageway slip roads may fit in a number of site categories depending on their layout. Site Categories should be assigned according the principles in HD 28.
- 3.. Where '68+' material is listed in this Table, none of the three most recent results from consecutive PSV tests relating to the aggregate to be supplied must fall below 68.
- 4 Throughout this Table, HFS means specialised high friction surfacing, conforming to Clause 924 of the Specification (MCHW 1). Where HFS is required on the approaches to a hazard, the minimum treatment length must be 50m. This may be extended where queuing traffic or sightlines indicate that 50m may not be sufficiently long.
5. For site categories G1/G2, S1/S2 and R any PSV in the range given for each traffic level may be used for any IL and should be chosen on the basis of local experience of material performance. In the absence of this information, the values given for the appropriate IL and traffic level must be used.
6. For new construction the PSV selected should match the lowest dark shaded investigatory level in table 4.1 in HD28. For maintenance the PSV selected should match the investigatory level already assigned to the site from table 4.1 of HD 28.
7. Site categories K and Q should not be applied to the circulatory parts of a roundabout.
8. For maintenance schemes only, the number of commercial vehicles per lane can be regarded as equivalent to the number of vehicles >6.6m in length.
9. Basic Oxygen Steel (BOS) slag complying with the chemical composition given below shall be classified as equivalent to PSV₆₀ aggregate up to and including 4,000 cv/lane/day traffic at design life in Site Categories A1, B1 and C:

Fe ₂ O ₃	20 to 30%
CaO	40 to 50%
SiO ₂	10 to 15%
MgO	4 to 10%

Site category	Site description	IL	Minimum PSV required for given IL, traffic level and type of site									
			Traffic (cv/lane/day) at design life									
			0-250	251- 500	501- 750	751-1000	1001-2000	2001-3000	3001-4000	4001-5000	5001-6000	Over 6000
A1	Motorways where traffic is generally free-flowing on a relatively straight line	0.30	50	50	50	50	50	50	50	53	63	63
		0.35	50	50	50	50	50	53	53	53	63	63
A2	Motorways where some braking regularly occurs	0.35	50	50	50	55	55	60	60	65	65	65
B1	Dual carriageways where traffic is generally free-flowing on a relatively straight line	0.30	50	50	50	50	50	50	50	53	63	63
		0.35	50	50	50	50	50	53	53	53	63	63
		0.40	50	50	50	50	53	58	58	58	63	68+
B2	Dual carriageways where some braking regularly occurs	0.35	50	50	50	55	55	60	60	65	65	65
		0.40	55	60	60	65	65	68+	68+	68+	68+	68+
C	Single carriageways where traffic is generally free-flowing on a relatively straight line	0.35	50	50	50	50	50	53	53	58	63	63
		0.40	50	53	53	58	58	63	63	63	68+	68+
		0.45	53	53	58	58	63	63	63	63	68+	68+
G1/G2	Gradients >5% longer than 50m as per HD 28	0.45	55	60	60	65	65	68+	68+	68+	68+	68+
		0.50	60	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS
		0.55	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS
K	Approaches to pedestrian crossings and other high risk situations	0.50	65	65	65	68+	68+	68+	HFS	HFS	HFS	HFS
		0.55	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS
Q	Approaches to major and minor junctions on dual carriageways and single carriageways where frequent or sudden braking occurs but in a generally straight line	0.45	60	65	65	68+	68+	68+	68+	68+	68+	HFS
		0.50	65	65	65	68+	68+	68+	HFS	HFS	HFS	HFS
		0.55	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS
R	Roundabout circulation areas	0.45	50	55	60	60	65	65	68+	68+	68+	68+
		0.50	68+	68+	68+	68+	68+	68+	68+	68+	68+	68+
S1/S2	Bends (radius <500m) on all types of road, including motorway link roads; other hazards that require combined braking and cornering	0.45	50	55	60	60	65	65	68+	68+	HFS	HFS
		0.50	68+	68+	68+	HFS	HFS	HFS	HFS	HFS	HFS	HFS
		0.55	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS	HFS

Table 3.1b: Minimum PSV for coarse aggregate in hot applied thin surface course systems.

Notes:

1. Site categories are grouped according to their general character and traffic behaviour. The Investigatory Levels (IL) for specific categories of site are defined in HD 28 (DMRB 7.3.1). The IL to be used here must be that which has been allocated to the specific site on which the material is to be laid, as determined by following the procedures in HD 28.

2. Motorway or dual carriageway slip roads may fit in a number of site categories depending on their layout. Site Categories should be assigned according the principles in HD 28

3.. Where '68+' material is listed in this Table, none of the three most recent results from consecutive PSV tests relating to the aggregate to be supplied must fall below 68.

4 Throughout this Table, HFS means specialised high friction surfacing, conforming to Clause 924 of the Specification (MCHW 1). Where HFS is required on the approaches to a hazard, the minimum treatment length must be 50m. This may be extended where queuing traffic or sightlines indicate that 50m may not be sufficiently long.

5. For site categories G1/G2, S1/S2 and R any PSV in the range given for each traffic level may be used for any IL and should be chosen on the basis of local experience of material performance. In the absence of this information, the values given for the appropriate IL and traffic level must be used.

6. For new construction the PSV selected should match the lowest dark shaded investigatory level in table 4.1 in HD28. For maintenance the PSV selected should match the investigatory level already assigned to the site from table 4.1 of HD 28

7. Site categories K and Q should not be applied to the circulatory parts of a roundabout.

8. For maintenance schemes only, the number of commercial vehicles per lane can be regarded as equivalent to the number of vehicles >6.6m in length.

9. Basic Oxygen Steel (BOS) slag complying with the chemical composition given below shall be classified as equivalent to PSV₆₀ aggregate up to and including 4,000 cv/lane/day traffic at design life in Site Categories A1, B1 and C:

Fe ₂ O ₃	20 to 30%
CaO	40 to 50%
SiO ₂	10 to 15%
MgO	4 to 10%

Revised Paragraph 2.1 Surface Course Material Options

The choice of surface course material plays a vital role in providing roads that meet the needs of the user, are safe and give value for money. For many years hot rolled asphalt with chippings rolled into the surface was the most widely used surfacing on trunk roads, including motorways, for both new construction and major maintenance. For the last two decades, thin surface course systems have been the preferred surfacing. It is important that a broad range of surface course material options are available for use, to enable the selection of the material that has the optimum properties required in each location. This Chapter gives guidance on the range of surface course options that are available for both new construction and maintenance.

Revised Paragraph 2.2 Choice of Surface Course Material

The permitted pavement surfacing options have been determined by the Overseeing Organisations, as indicated in Tables 2.2 (E), (W), (S) and (NI), taking account of the variations of a number of factors across the UK:

- the nature of the existing network;
- population density;
- location of noise sensitive receptors;
- traffic intensity;
- history of use;
- climatic conditions;
- availability of materials.

Revised Paragraph 2.3

The decision on which surfacing type is selected should be made on a site-specific basis but none should be ruled out without justification.

Revised Table 2.2E (England): Permitted Pavement Surface Course Materials for New and Maintenance Construction

	Use without departure	Departure required
New Construction	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt ^{Note 1}	MCHW Clause 1044 Exposed Aggregate Concrete ^{Note 2}
Major Maintenance	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt ^{Note 1} MCHW Clause 923 Cold Applied Ultra-Thin Surfacing ^{Note 1}	MCHW Clause 1044 Exposed Aggregate Concrete ^{Note 2} MCHW Clause 1026 Textured Concrete ^{Note 2}
Minor Maintenance	MCHW Clause 942 Thin Surface Course System ^{Note 1} MCHW Clause 943 Hot Rolled Asphalt ^{Note 1} MCHW Clause 923 Cold Applied Ultra-Thin Surfacing ^{Note 1}	MCHW Clause 922 Surface Dressing MCHW Clause 918 Slurry Surfacing and Microsurfacing MCHW Clause 1044 Exposed Aggregate Concrete ^{Note 2} MCHW Clause 1026 Textured Concrete ^{Note 2}

Note 1. In England hot rolled asphalt and cold applied ultra-thin surfacing may only be considered for use at sites that meet the following, all inclusive, criteria:

- No noise ‘sensitive receptors’ are located within an envelope 600m from the roadside and 600m from the ends of the sections. Examples of ‘sensitive receptors’ are given in DMRB Volume 11, HD 213/11.
- The scheme is not considered noise sensitive and does not have noise barriers or noise mitigation earth bunds.
- The location has not been identified as an Important Area, either with or without First Priority Locations, in any of England’s Noise Action Plans published by DEFRA in March 2010 or any update thereof.

Note 2. Rigid construction only

Revised Table 2.2W (Wales): Permitted Pavement Surface Course Materials for New and Maintenance Construction

				Use without restriction	Departure required
New Construction Or Major Maintenance?	Yes			MCHW Clause 942 Thin Surface Course System	MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 938 Porous Asphalt MCHW Clause 1044 Exposed Aggregate Concrete ^{Note 1}
	No (minor)	High speed? (85%ile above 65 km/hr)	Yes	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt on bridge decks and where Level 1 noise requirement specified	MCHW Clause 943 Hot Rolled Asphalt in other locations MCHW Clause 938 Porous Asphalt MCHW Clause 922 Surface Dressing MCHW Clause 1044 Exposed Aggregate Concrete ^{Note 1} MCHW Clause 1026 Textured Concrete ^{Note 1}
			No	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt on bridge decks and where Level 1 noise requirement specified	MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 938 Porous Asphalt MCHW Clause 922 Surface Dressing MCHW Clause 918 Slurry Surfacing and Microsurfacing MCHW Clause 1044 Exposed Aggregate Concrete ^{Note 1} MCHW Clause 1026 Textured Concrete ^{Note 1}

Note 1: Rigid construction only

Revised Table 2.2S (Scotland): Permitted Pavement Surface Course Materials for New and Maintenance Construction

All construction types

Is Scheme within Noise Management Area?	Use without Approval	Approval to Proceed required
No	MCHW Clause 911TS Hot Rolled Asphalt ^{Note 1} MCHW Clause 942TS Stone Mastic Asphalt Surface Course (TS2010)	MCHW Clause 942 Thin Surface Course System MCHW Clause 938 Porous Asphalt MCHW Clause 922 Surface Dressing MCHW Clause 1044 Exposed Aggregate Concrete MCHW Clause 1026 Textured Concrete MCHW Clause 918 Slurry Surfacing and Microsurfacing
Yes	Approval to Proceed required in all cases ^{Note 2}	MCHW Clause 943 Hot Rolled Asphalt TS2010 SMA Surface Course MCHW Clause 942 Thin Surface Course System MCHW Clause 938 Porous Asphalt Generic SMA MCHW Clause 918 Slurry/Microsurfacing

Note 1: Refer to Overseeing Organisation on rigid construction

Note 2: In Scotland, due consideration shall also be given to the location and proximity of any Noise Management Areas (NMA). Further information on NMAs can be obtained from the Overseeing Organisation. It is considered that certain variants of surface course materials will provide better noise performance than others and for this reason scheme specific “Approval to Proceed” is required in all cases and designers shall consult with the Overseeing Organisation in regards to material specification.

Revised Table 2.2NI (N Ireland): Permitted Pavement Surface Course Materials for New and Maintenance Construction

Flexible construction (with asphalt or hydraulic bound base)

				Use without restriction	Departure required
New Construction Or Major Maintenance?	Yes	High speed? (85%ile above 65 km/hr)	Yes	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt	MCHW Clause 938 Porous Asphalt ^{Note 1}
			No	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt Coated macadam	MCHW Clause 938 Porous Asphalt ^{Note 1} Generic SMA
	No (minor)	High speed? (85%ile above 65 km/hr)	Yes	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt Surface Dressing	MCHW Clause 938 Porous Asphalt ^{Note 1}
			No	MCHW Clause 942 Thin Surface Course System MCHW Clause 943 Hot Rolled Asphalt Coated macadam MCHW Clause 922 Surface Dressing MCHW Clause 918 Slurry Surfacing	MCHW Clause 938 Porous Asphalt ^{Note 1} Generic SMA

Note 1: not permitted on flexible with hydraulic bound base (flexible composite)

Rigid

				Use without restriction	Departure required
New Construction Or Major Maintenance?	Yes	High speed? (85%ile above 65 km/hr)	Yes	MCHW Clause 1044 Exposed Aggregate Concrete	MCHW Clause 1026 Textured Concrete
			No	MCHW Clause 1044 Exposed Aggregate Concrete	MCHW Clause 1026 Textured Concrete
	No (minor)	High speed? (85%ile above 65 km/hr)	Yes	MCHW Clause 1044 Exposed Aggregate Concrete MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 922 Surface Dressing	MCHW Clause 1026 Textured Concrete MCHW Clause 938 Porous Asphalt MCHW Clause 942 Thin Surface Course System
			No	MCHW Clause 1044 Exposed Aggregate Concrete MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 922 Surface Dressing MCHW Clause 918 Slurry Surfacing	MCHW Clause 1026 Textured Concrete MCHW Clause 938 Porous Asphalt MCHW Clause 942 Thin Surface Course System Generic SMA

Rigid composite

				Use without restriction	Departure required
New Construction Or Major Maintenance?	Yes	High speed?	Yes	MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 942 Thin Surface Course System	MCHW Clause 938 Porous Asphalt
		(85%ile above 65 km/hr)	No	MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 942 Thin Surface Course System MCHW Clause 922 Surface Dressing	MCHW Clause 938 Porous Asphalt
	No (minor)	High speed?	Yes	MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 942 Thin Surface Course System	MCHW Clause 938 Porous Asphalt Generic SMA
		(85%ile above 65 km/hr)	No	MCHW Clause 943 Hot Rolled Asphalt MCHW Clause 942 Thin Surface Course System MCHW Clause 942 Surface Dressing MCHW Clause 918 Slurry Surfacing	MCHW Clause 938 Porous Asphalt Generic SMA

Revised Paragraph 2.8

Retexturing of existing surfaces is not permissible without Departure approval. This approval will not be unreasonably withheld for small lengths of pavement with a particular skidding or other safety concern.