

**Pavement & Materials Partnering Committee**  
**Work Product Scoping Document**  
**2018 Section 94 Asphaltic Emulsions Update**  
**November 27, 2018**

**Task Group**

Asphalt Task Group/Pavement Preservation Subtask Group

**Title**

2018 Section 94 Asphaltic Emulsions Update

**Problem Process**

- Annual
- Expedited
- Emerging Initiative

**Statement of Effort/Improvement**

Section 94 includes specifications for furnishing asphaltic emulsions. However, there are four emulsions currently used by Caltrans that are not included in Section 94 but are specified in Section 37 or 39 and in an NSSP. Currently Section 94 is silent on the furnishing requirements for these four emulsions. Since Section 94 needs to be revised, the working group will also review the following technical content listed in the attached *Section 94 Review Table* to update Section 94.

**Purpose**

The purpose is to include the furnishing specifications for four emulsions into Section 94 which are currently not in the Section 94 but are referenced in Sections 37, 39 and an NSSP. The technical content in Section 94 hasn't been reviewed since the 2006 Specification's revision. This is an opportunity for the working group to review and decide which content shall be included in the revision. These are the known technical issues with Section 94 that need to be reviewed:

- Include four emulsions into Section 94 that already exist in other Caltrans Specifications
  - From RSS Section 37-3.02B(3) - PMCQS-1h – Emulsion for Slurry Seal
  - From RSS Section 37-3.03B(2) – MSE – Emulsion for Micro Surfacing
  - From Section 39-2.05A(1)(d)(iii) – PMAEM – Emulsion for Bonded Wearing Course
  - From Scrub Seal NSSP 37-2.07B(2) - PMRE - Emulsion for Scrub Seal or Chip Seal
  - Update PMCRS-2h specification table to include tests required in Section 37-2.03B(2)

- Remove the four emulsions furnishing specifications from Sections 37, 39 and NSSP.
- Add CRS-1h and CRS -2h to Table for Rapid Setting Cationic Emulsions instead of specification via footnote.
- Review and update identified testing method issues and procedures for consistency across all tables
- Review viability of Section 94 emulsion products for compliance with current CA Air Quality Requirements. Remove them if they won't meet the requirements.
- Add sample storage, handling, and testing time requirements for all emulsions in accordance with AASHTO recommendations

### **Background**

Section 94 has not been thoroughly reviewed for technical content since the 2006 Specification Revision. The four asphaltic emulsions listed above are currently used by Caltrans are specified in Sections 37, 39 or in a NSSP but are not currently included in Section 94. Section 37, 39, or NSSP include general specifications for applying bituminous seals whereas Section 94 includes specifications for furnishing asphaltic emulsions. This effort by working group is going to include the furnishing specifications in Section 94 that are currently in Section 37, 39 and NSSP.

There are some technical advancements in the asphaltic emulsions since the 2006 Standard Specification revision that shall be considered to be included into the Section 94 update.

### **Approach**

#### 1. Street Ready Assurance

The working group will work with Industry, Construction, METS, and Asphalt Pavements to review existing specification for any technical issues, add four emulsions and then circulate the revised specification for comments from Industry, Construction, Design and METS personnel for any fatal flaws.

#### 2. Performance Tracking/Management

Periodic reviews by subtask group to insure changes aren't creating problems for Construction or Industry.

3. Consistently Implemented

Working with Industry, Construction, METS, and Design to provide a transmittal memo and Construction manual update on the changes made to Section 94 to the districts.

4. Pilot Projects (if anticipated)

No pilot projects are anticipated.

5. Research Needs (if necessary)

N/A

**Team Members (Indicate CT Chair and Industry Lead)**

<b>CT/Industry</b>	<b>Division/Firm Name</b>	<b>Member Name</b>
CT	Asphalt Pavement	Douglas Mason (Chair)
CT	METS	Seree (Mack) Yenjai
CT	Asphalt Pavement	Kee Foo
CT	Construction	Raguparan Thangavelautham
IN	Telfer Pavement	Scott Dmytrow (Lead)
IN	VSS Emultech	Sallie Houston
IN	Ergon	Todd Vargason

**Objectives/Deliverables/Due Dates**

There are two objectives for this working group.

1. Include four asphaltic emulsions listed in Section 37, 39, or NSSP into section 94. Also, the working group will remove the four asphaltic emulsions specifications from Section 37, 39, and NSSP.
  
2. Review the technical content that is listed in the attached *Section 94 Review Table* and come to a consensus within the working group on which content must be included in Section 94 by 03/15/2019. This will help the working group to be on schedule with the deliverables. If there is any content that hasn't achieved consensus will be considered in future work products.

Details:

<b>Milestones</b>	<b>Name - Responsible Party</b>	<b>Due Date (Start/Complete)</b>
Develop Scoping Document	Douglas Mason	Complete 11/9/2018
Collect Comments on Technical Content Listed under Purpose (See Attachment 1)	Douglas Mason	Complete 12/15/2018
Resolve Comments and/or Come to Consensus on Technical Content	Douglas Mason	Complete 3/15/2019
Finalize Section 94 Revised Standard Specifications and Send to OCCS	Douglas Mason	Complete 4/15/2019
Training and guidance	Douglas Mason	Complete 7/15/2019

\*Some milestones listed above may not be necessary

**Resources To Develop and Implement**

	<b>Caltrans Hours</b>	<b>Industry Hours</b>
Development  (Collect and resolve comments, develop revised Section 94 RSS)	400 plus travel	400 plus travel
Implementation  (Finalize Section 94 Revised Standard Specifications, obtain stakeholder approval and Send RSS to OCCS for posting)	40	40

**Benefits**

The benefits after the completion of this work product are:

- This will benefit Caltrans and the suppliers by raising awareness of available materials by including specification requirements for all asphaltic emulsions in a central location, Section 94.
- Removal of emulsion furnishing specification requirements from Section 37, 39 and NSSP and placing them in the correct location, Section 94, will aid the Engineer when building projects and referencing materials.
- The technical content hasn't been reviewed since 2006. This effort would bring Section 94 to be current with the latest developments and correct issues with specification language that could cause issues with testing that could lead to claims in construction.

**Estimated Impact to Caltrans and Contractor -**

- Bring consistency in specifying furnishing requirements of the asphaltic emulsions.
- Update Section 94 for technical content.
- Bring clarity to the furnishing specification of asphaltic emulsion in Section 94.

**Impediments to Completion of Deliverables –**

- Caltrans and Industry Resources – Busy schedules, construction seasons, and other projects
- Lack of data or expertise to verify technical content

Attachment: Section 94 Review Table



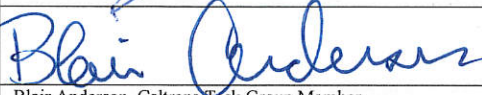

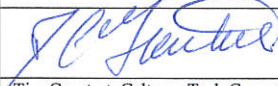
Pavement & Materials Partnering Committee  
 Scoping Document  
 Asphalt Task Group/Pavement Preservation Subtask Group  
 2018 Section 94 Asphaltic Emulsions Update  
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**Recommendation and Approval**


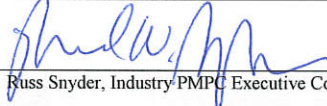
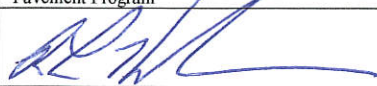
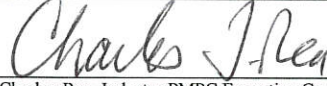
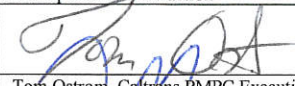
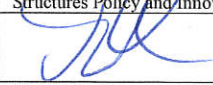
This scoping document for Section 94 Asphaltic Emulsions update was prepared by Pavement Preservation Subtask group to address a priority issue with statewide significance and is within the Pavement & Materials Partnering Committee mission as described in the Pavement & Materials Partnering Committee Charter. The Subtask Group members have determined the scope, resources required and timeline for delivery of this project to attempt to ensure that the deliverables are achievable. A signature here indicates that each Task Group and PMPC Executive Committee is committed to providing the resources to support this effort within the prescribed timeframes. Furthermore, it is everyone's responsibility to ensure that the final effort/improvement will be:

- 1) Street-Ready,
- 2) Monitored and reported for performance,
- 3) Successfully implemented statewide as appropriate.

**Scoping Document Recommendation and Industry Concurrence by (name and date):**

Caltrans Name (Recommendation)	Date	Industry Name (Concurrence)	Date
 Tom Pyle, Caltrans Task Group Chair	12/5/18	 Pat Imhoff, Industry Task Group Lead	12/5/18
 Blair Anderson, Caltrans Task Group Member	12/5/18	 Tracy Zibek, Industry Task Group Co-Member	12/5/18
 Tim Greutert, Caltrans Task Group Member	12/5/18		

**Scoping Document Approval and Industry Concurrence by (name and date):**

Caltrans Name (Approval)	Date	Industry Name (Concurrence)	Date
 Sergio Aceves, Caltrans PMPC Executive Committee – Chair Pavement Program	12/11/18	 Russ Snyder, Industry PMPC Executive Committee	12/6/18
 Ray Hopkins, Caltrans PMPC Executive Committee Headquarters Construction	12/6/18	 Charley Rea, Industry PMPC Executive Committee	12/6/18
 Tom Ostrom, Caltrans PMPC Executive Committee Structures Policy and Innovation	12/6/18		
 Dan Speer, Caltrans PMPC Executive Committee Materials Engineering and Testing Services	12/6/18		

Approval Date: \_\_\_\_\_