# Pilot Training Courses for Caltrans – CIWMB Project on Rubberized Asphalt Concrete

**Purpose of the Course:** Promote the Use of Rubberized Asphalt Concrete through Technology Transfer

## Rubberized Asphalt Concrete Training Course Outline

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<table>
<thead>
<tr>
<th>Module (minutes)</th>
<th>Description</th>
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</table>
| Prelude (5)      | Course Objectives  
• Basics of RAC  
• Use of RAC  
• Design/Construction of RAC  
• Inspection & Basic Trouble Shooting |
|                   | Course Content  
• Structural Design  
• Materials  
• Construction  
• Inspection Guide |
|                   | RAC History  
• Advantages  
• Applications  
• Performance |
|                   | Caltrans Experience  
• RAC Use  
• Research  
• Challenges |
|                   | Primary References  
• AR Usage Guide  
• Syntheses  
• Recycling of RAC  
• Structural Design |
| Introduction (15) | New Pavements  
• Current Practice  
• 2005 Study Findings  
• Preliminary Recommendations |
|                   | Overlays  
• Current Practice  
• 2005 Study Findings  
• Preliminary Recommendations |
|                   | Project Selection  
• New Pavements  
• Overlays  
• Inlays  
• Project Size/Facilities |
|                   | Cost Analysis  
• Initial Costs  
• Life Cycle Costs |
| Structural Design (35) | Definitions  
• Asphalt Rubber  
• Wet Process  
  • Rubber Modified Asphalt  
  • Modified Binder  
  • Dry Process |
|                   | AR Binder  
• Crumb Rubber Modifier  
• Asphalt Cement  
• Other Additives  
• Interactions |
|                   | Specifications  
• Asphalt Modifier  
• Asphalt & Extender Oils  
• Crumb Rubber Modifier |
|                   | ARB Design Profile  
• Purpose  
• Example  
• Submittals |
|                   | RAC Mix Types  
• RAC-D  
• RAC-G  
• RAC-O  
• RAC-O-HB |
| Materials (40)    | Cost Analysis  
• Initial Costs  
• Life Cycle Costs |
|                   | Construction (40)  
• Surface Preparation  
  • Crack Sealing  
  • Patching/Leveling  
  • Tack Coat |
|                   | Manufacture  
• Binder  
• Aggregate  
• Mix |
|                   | Mixing & Delivering  
• Mixing  
• Delivering |
|                   | Placement/Compaction  
• Placement  
• Compaction |
|                   | Specs/SSPs  
• RAC-G  
• RAC-O |
|                   | Inspection Guide (30)  
• AR Binder Production  
  • Required Document  
  • Inspection Items  
  • Sampling |
|                   | RAC Mix Production  
• Required Document  
• Inspection Items/Log/Checklist  
• Sampling & Testing |
|                   | Inspection at Site  
• Before overlay placement  
• During RAC Placement  
• After Paving |
|                   | Trouble Shooting  
• Segregation  
• Smoke  
• Appearance |
| Break (20)        | Summary (5)  
• Best Practices  
• Limitations/Challenges  
• Resources  
• Acknowledgements |
|                   | Jeopardy (35)  
• Assessment of Learning  
• Course Evaluation (15) |