

Research Project Descriptions

| UTC Project Information | |
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| Project Title | Development of Special Provision for Mix Design of Foamed-WMA Containing RAP |
| University | The University of Oklahoma |
| Principal Investigator | PI: Rouzbeh Ghabchi, The University of Oklahoma (OU) Co-PI: Manik Barman, University of Minnesota Co-PI: Musharraf Zaman, The University of Oklahoma (OU) |
| PI Contact Information | Rouzbeh Ghabchi; ghabchi@ou.edu |
| Funding Source(s) and Amounts Provided (by each agency or organization) | SPTC: \$79,917 Silver Star Construction: \$66,560 Oklahoma Asphalt Pavement Association: \$14,880 |
| Total Project Cost | \$161,357 |
| Agency ID or Contract Number | DTRT13-G-UTC36 SPTC 15.1-31 |
| Start and End Dates | 5/1/16 - 4/30/17 |
| Brief Description of Research Project | <p>PROBLEM: Although the use of warm mix asphalt (WMA) is increasing rapidly in Oklahoma and neighboring states in Region 6, lack of specifications for mix designs is hurting the asphalt producers and users (DOTs and others) alike. Among different practices used for producing WMA, plant foaming is gaining attention because of reduced costs, particularly when water is used for foaming. Most asphalt mixes (both HMA and WMA) used in paving projects in Region 6 contain Reclaimed Asphalt Pavement (RAP). Specifications or special provisions for foamed-WMA containing RAP are particularly lacking.</p> <p>PROPOSED SOLUTION: The primary goal of this project is to develop a draft special provision for WMA mix designs that can be adopted readily by the Oklahoma Department of Transportation (ODOT), Oklahoma Turnpike Authority (OTA), the asphalt industry and others. The special provision will address the following: (i) the oven aging period during the design process and (ii) adjusting the asphalt binder content. This will facilitate the accruing of benefits associated with WMA without compromising the quality of constructed pavements.</p> |
| Describe Implementation of Research Outcomes (or why not implemented) | |
| Place Any Photos Here | |

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| Impacts/Benefits of Implementation (actual, not anticipated) | |
| Web Links <ul style="list-style-type: none">• Reports• Project website | |