

National Peer Review



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Peer Review Team

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Focus Areas

1. Michigan Recycled Asphalt Pavement (RAP)/Recycled Asphalt Shingles (RAS) Usage
2. Mix Design Practices
3. Construction Practices
4. Local Agency Acceptance/Mixture Specifications
5. MDOT Acceptance Practices/Mixture Specifications
6. Sampling Methods
7. Ride Quality
8. Warm Mix Asphalt
9. Liquid Binder Testing and Certification

National Peer Review Confirmation of Recent MDOT Changes

Regression of Air Void Approach (Was this done correctly?)

- Continue Current Practice
- Lower Air Voids Obtained by Increasing Asphalt

Longitudinal Joint Density Practices

- States implementing joint density specifications have seen improvements
- Future consideration on local agency projects

Only Fine Graded Mixes or GGSP for Top Courses

- Continue Current Practice
- NAPA and FHWA planning a national effort to promote the use of SMA (GGSP)

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Focus Area 1 - RAP/RAS

Peer Review Team Observations/Recommendations

100% Assumption of Binder in HMA from RAP/RAS

- RAS contribution should be lowered to .7-.85
- All RAS binder does not rejuvenate
- Specification revision this year

Michigan Local Agency Allowance Practices for RAP

- Most local agencies in other states use DOT specifications
- Volumetric testing for QA important
- Goal is to work with local agencies to encourage RAP usage

RAP Stock Pile QA/QC Procedures

- MDOT should consider additional testing and analysis of RAP materials (RAP aggregate Gsb)
- Results in better control of mixture quality

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Focus Area 2 - Mix Design Practices

Peer Review Team Observations/Recommendations

Aggregate Specific Gravity Verification Practices

- Perform specific gravity verification during mix design and during production
- Results in better control of mixture quality
- Need to establish specification tolerances and procedures

MDOT's Past and Current Usage of GGSP

- Other states are using RAP in SMA (GGSP)
- Could lower costs and encourage more use
- Pilot projects needed

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Focus Area 3 - Construction Practices

Peer Review Team Observations/Recommendations

Bond Coat Practices Review

- Need to pay more attention to selection and application of tack coat materials
- Good tack coat application is essential for good performance
- Construction Committee currently reviewing specifications

Are Other States Performing Field Verification of Bond Coat Application Rate?

- In general no but there is agreement that more attention is needed
- Construction Committee currently reviewing specifications

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Focus Area 4 - Local Agency

Acceptance/Mixture Specifications

Peer Review Team Observations/Recommendations

Michigan Local Agencies Non-Volumetric Acceptance Approach and Specification

- Volumetric acceptance should be required for all acceptance and quality control
- Work with local agencies to develop, implement, train.

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Focus Area 5 - MDOT Acceptance/Mixture Specifications

Peer Review Team Observations/Recommendations

Mix Regression Compared to Reduced Gyration Levels

- Decisions to target a lower air void content and reduce Ndesign levels should not be considered mutually exclusive
- States have reduced or simplified number of gyrations levels

MDOT Superpave Gyration Levels. What are Other States Doing?

- Michigan has too many different gyration levels
- Work towards simplifying gyration level categories

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Focus Area 6-8

Sampling Methods (6), Ride Quality (7), Warm Mix Asphalt (8)

Peer Review Team Observations/Recommendations

MDOT's approach similar to other states

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Focus Area 9 - Binder Testing/Certification

Peer Review Team Observations/Recommendations

Location of Certification/Verification Sampling

- Difficult to determine if material shipped from binder supplier meets specification requirements on every shipment
- Need to have discussions on frequency of certification verification testing