



Bituminous Concrete QA

Bituminous Concrete Materials Manager

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Overview

- Changes in Our Program
- Challenges we have faced
- Future Plans and Initiatives

Background

- Field Testing about 400,000 tons of mix a year, with around 900 plant samples taken.
- Labs in 2018 tested 133 HMA box samples, 388 PG Binder, 165 Emulsified Asphalt, and 500 Cores samples
- Review and Approved 140 mix designs
- QA Spec introduced around 1995
- 60/40 - QA vs Method spec

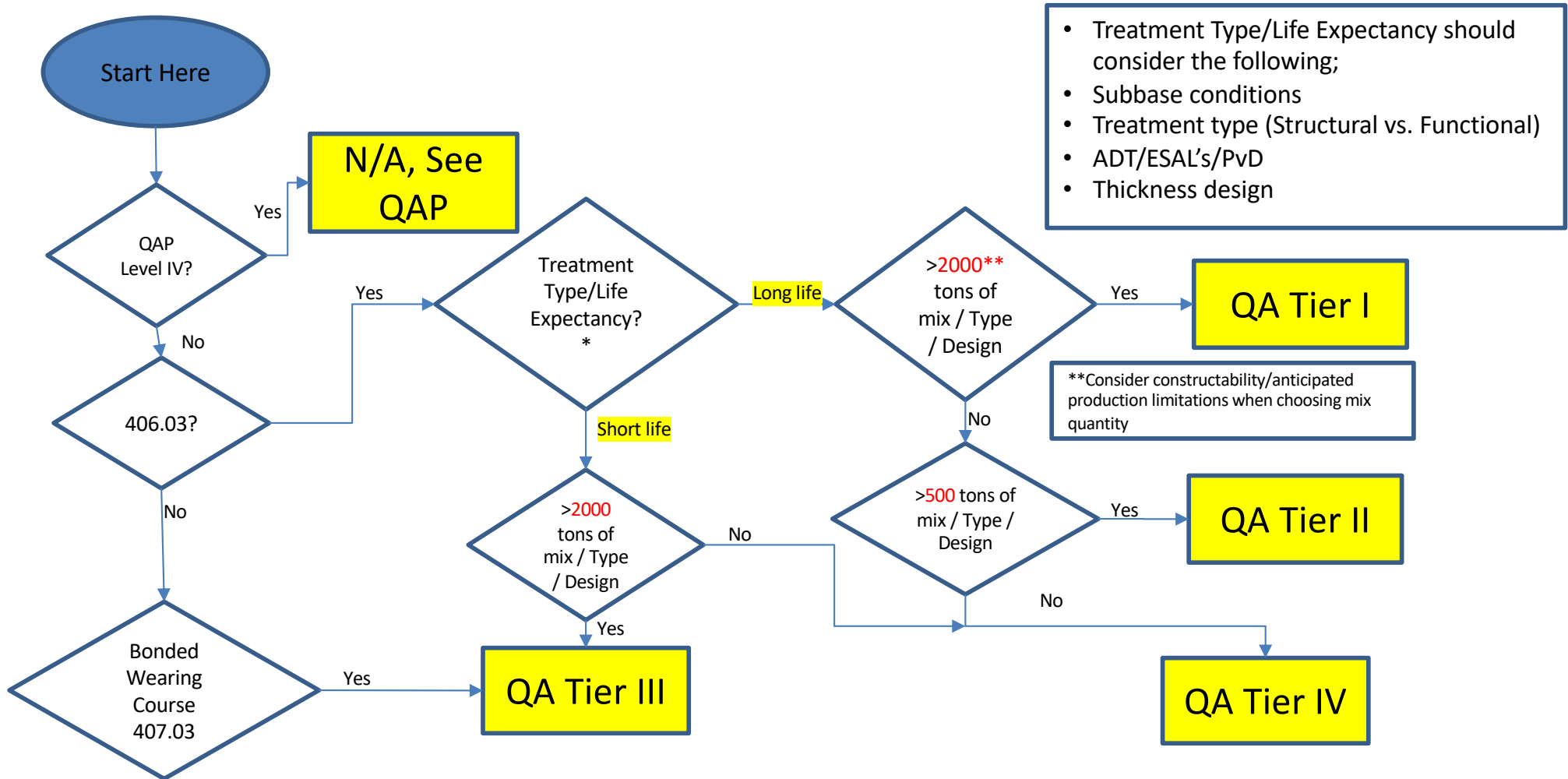
Challenges we have Faced

- Increasing rate of failures, and long process of negotiated outcomes for Method Spec
- Applying single level of QA effort to all projects regardless of size/risk
- Ultra-Thin bonded wearing course covered by Method Spec, and major challenge assigning penalty

Changes in Our Program

- New QA Tiered Approach
 - Moves us further into risk-based approach
- Changes to the QA Spec
 - UTBWC to QA Spec
- Performance Related Testing

Changes in Our Program



Changes in Our Program

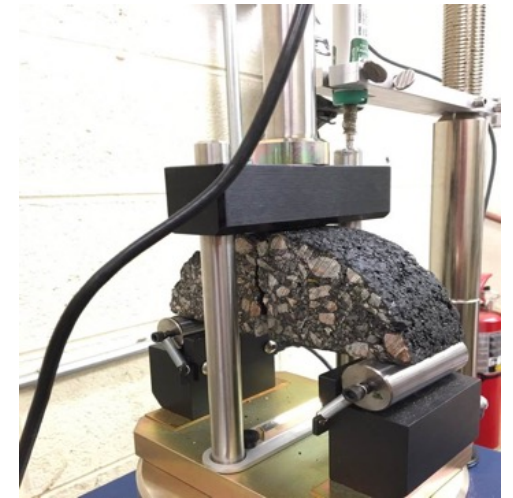
- QA Tier I - Statistical Pay factors: 3000 ton lots, Air Voids 6 samples, AC Content 6 samples, Density, Joint Density, Ride
- QA Tier II - Statistical Pay factors: Variable sub lot sizes, Air Voids 3-4 samples, AC Content 3-4 samples, Density, Joint Density, Ride
- QA Tier III - Statistical Pay factors: 3000 ton lots, Gradation 6 samples, AC content 6 samples, Density, Joint Density, Ride
- QA Tier IV - Pass/Fail: Gradation, AC Content, Mix Temp, Air Voids QAP level I& II, VMA QAP level I& II, Density , Joint Density

Changes in QA Specs

- Increase use of Statistical Pay Factors
 - Everything except small quantities
- Moving to AASHTO M332
- Removed Marshall
- Eliminate TSR for mix design approval, and replace with HWT and I-FIT
- Revision to QC Plan requirements
- Align QA Test and Density Core Lots

Performance Related Specifications

- Balanced Mix Design Special Provision on two project
 - Poultney-Castleton, 8400 tons
 - Bristol-Starksboro, 5900 tons
- Testing every 3000 tons
 - Rut depth < 10mm
 - SIP > 15,000 passes
 - FI > 10



Future Plans and Initiatives

- Following 2016 FHWA QA Stewardship Review
 - Move toward sampling at the paver.
 - Begin getting extracted Asphalt Content from ignition oven, through central lab testing.
- Revised HMA QA Spec going out this winter for 2020 pilot, and will be reviewed with industry.
- Full incorporation of Performance Related test into QA Specification

Closing

Questions or Comments?

Thanks!

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