PAPA Regional Technical Meeting

State College

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District 9-0

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PA Asphalt Pavement Assoc.
PAPA
Pennsylvania rides on us... ASPHALT

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2019 Bituminous Testing

Testing:

- 62 Lots- Mixture Acceptance by box sample
- 37 Lots – Density Acceptance by pavement core

Failures:

- 1 AC failure (Sec. 409 Non PWL - 50% Pay)
- 0 Gradation failure
- 0 Density failures

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2019 Longitudinal Joint Density Performance

	Longitudinal Joint Density Summary			
Year	2016	2017	2018	2019
Lots Tested	329	354	394	371
% Density Range	77.9-98.4	85.7-98.5	82.9-98	81.9-99
% Average Density	92.8	92.8	92.8	92.8
Total $ for Incentive Lots	1,342,870	1,229,450	1,698,808	969,434
Total $ for Disincentive Lots	(27,474)	(59,060)	(49,120)	(29,461)
Delta (Incentive – Disincentive)	1,315,396	1,170,390	1,649,688	939,973

REF: Section 405 Evaluation of Bituminous Pavement Longitudinal Joint Density and Payment of Incentive/Disincentive

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2019 Longitudinal Joint Density Performance

- Longitudinal Joint Type
  - Which joint type is being utilized most-
    - Primarily Vertical/Butt Joint
    - Some Tapered/Notched Wedge
  - Which joint type is producing better density
    - Varies by contractor/mix; but, appears Notched Wedge trends higher historically
  - Longitudinal joint issues?
    - Performing very well overall.

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2019 Percent Within Limits (PWL)

	District 9 - PWL SUMMARY			
Year	2016	2017	2018	2019
Number of PWL Projects Let	27	38	44	32
Number HOLA	13	22	21	14
Number LTS	14	16	23	*18
Average Pay Factors (%)				
Asphalt Content	101.29	100.82	101.45	101.68
Primary Control Sieve	98.88	99.65	101.07	99.22
#200 Sieve	102.56	101.70	98.86	99.90
Density (Cores)	103.20	101.69	103.00	101.09
Average Density	94.3	94.3	94.6	94.2
Average Overall Lot Pay Factor (%)	1.01	1.01	1.02	1.01
Incentive ($)	$159,038.61	$144,658.62	$334,314.41	$80,762.18
Disincentive ($)	-$45,848.47	-$88,688.77	-$84,783.69	-$50,699.20

*** 5 Projects switched from LTS to HOLA in 2019**

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District Innovations & Best Practices

- Two 6.33 mm Thin Lift projects in 2018 & 2019.
  - Approximately 18,000 Tons, utilized HOLA.
  - Interstate preservation project planned for late 2020 let – Funding dependent.

- District utilizes SMA on all Interstate Highways and 4-lanes.
  - Feel it's a very good performing mix, extra AC for durability and Polymer Modified. Utilize HOLA.

- Specify NTT for all paving. Tack issues have been very negligible.

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District Innovations & Best Practices

- Used 19mm Hi-RAP on both ECMS/Contract and Dept. Force paving. Over 100,000 tons placed in 2019.
  - To date, no issues. Mix and placement/performance has been very favorable to date. Need to update SSP's to reflect 2020 Sec. 413 Spec. changes…
- Looking to pilot 9.5 mm Hi-Rap (Via ECMS- *Funding Dependent)- ***Need updated SSP for Sec. 413***
- Performed crack & seat on a portion of I-99
  - Worked well, utilized "Crack and Seat" special provision, not the Rubblizing spec. in 408, resulting in thinner overlay (9 ½").

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District Innovations & Best Practices

- Utilize Mobile lab-
  - Verify aggregate gravities
  - Verify mix designs, Max. gravities, voids, gradation/AC

- Other-
  - PME works with DME, review pavement designs
    - Utilize Pub. 242 to bump down gyrations where applicable to get more AC in paving courses.
    - Routinely "Bump" binder grades in rut prone areas.

  - Have been using CL. 4A Geotextile separator between subgrade/subbase layers +/- 15 years. (Now in 2020 Spec.)

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2020 District Changes - Direction

- Utilize District Special Provision for Local Acceptance of SMA. (SSP currently in CT process)
- Continue HOLA testing, with appropriate resources (SSP's currently in CT process)
- Increase use of preservation techniques- 6.3 Thin Lift in future. Good performing mix to date with substantial benefits.
- Increased use of FDR with bituminous overlay
  - Typically 19mm High-RAP

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Questions/Comments???

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