State Construction Office Update

2025 Flexible Pavement Committee Meeting
July 24, 2025

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State Construction Pavement Engineer

FDOT State Construction Office

Specification Changes
FY 2025-26 Workbook

- 330 & 338
  - Added IRI Incentive/Disincentive Smoothness Specifications for Limited Access & Non-Limited Access Roads
  - Removed Ride Number Specifications
  - Separates Straightedge from Laser-Tested Areas
- 330 & 334
  - Added Clarification (Industry Suggestion) About Roundabout Intersection Limits In Regards to Straightedge & Density Testing Exceptions

Specification Changes
FY 2025-26 Workbook

- 283 RAP Base
  - Use 85% of RAP's Gmm as density target instead of 95% of Modified Proctor Density
  - 95% of Modified Proctor Density resulted in densities in 70%'s of Gmm
  - Provides Better Compaction, Improved Performance, Potential Increased Use of RAP base
  - Can Be Used on Interstate Shoulders (Non-Emergency Use)
  - Additional Changes After Discussion with SMO Geotechnical & Asphalt Sections, & Industry
- 285 Optional Base Course
  - Minor Changes Needed Due to 283 Changes in RAP Base Use
- 234 Superpave Asphalt Base
  - Raised Spreadrate Tolerance to +/-10% to Match 10% Pay Quantity Tolerance
- 286 Driveway Base
  - Clarified Plan Quantity Tonnage Determination

Proposed Specification Changes
FY 2026-27

- 287 - Deleting Asphalt Treated Permeable Base (ATPB)
  - Only Used Once in Past 5 Years
  - Previously Used Under Concrete Pavement, Now Asphalt Base Used
- 9 – Deleting Reference to ATPB
- 330
  - Removing Requirement to Use Traffic Roller on Overbuild Course
  - Deleting ATPB Table 330-2
  - Adding FC-7 to Table 330-1 (Ambient Air Temps for Paving)

Potential Specification Change
FY 2027-28

- Contractor Concern With Failed Sublot Test Creating Low CPF That is Applied to All Asphalt in Lot, yet Material has been removed or some is left in place based on FDOT deeming it acceptable
- Currently, Only When Entire Sublot Tonnage is Removed Will FDOT Remove Failed Test & Pay at CPF Based On Remaining Sublot Tests
- Propose Prorating from Higher CPF (failed sublot test removed) to Lower CPF (failed sublot test remains) by Ratio of Sublot Tons Remaining Divided by Sublot Size (500 or 1,000 tons)

Potential Specification Change
FY 2027-28

- $CPF_{Prorated} = CPF_{FTR} - [(CPF_{FTR} - CPF_{All}) * (ST_{LIP} / ST_{Max})]$
  - Where:
    - $CPF_{Prorated}$ = CPF to Apply to Lot
    - CPF_{FTR} = CPF when failed test removed from the calculation
    - CPF_{ALL} = CPF determined when all tests in Lot are used
    - ST_{LIP} = Sublot Tonnage Left in Place (per Department)
    - ST_{Max} = 500 tons or 1,000 tons
      - Depends on Chosen Lot Size (2,000 tons or 4,000 tons, respectively)

FY 2027-28 - Potential Specification Change

Example of CPF adjustment		
		Sublot 3 failure
CPFftr	1.030	(Sublot 1, 2 & 4 tests used - Sublot 3 test removed)
CPFftlip	0.900	Sublots 1, 2, 3, & 4
CPF difference	**0.130**	= CPFftr - CPFftlip
STlip	200	failed test sublot tons remaining in place
STmax	500	max sublot tonnage (500 or 1,000 tons)
% Sublot LIP	**40%**	= STlip / STmax
CPF difference * % Sublot LIP	**0.052**	
CPFadjusted	**0.978**	**to be applied to Lot**

FY 2027-28 - Potential Specification Change

Example of Cost Impact						
	Maximum Lot Tons	2,000				
	Lot tons Left in Place	1,700				
Unit Cost	**$ 150**	**per ton**				
CPF	**Total Payment**	**Pay Diff**	**% Pay of CPF = 1.03**	**% Pay of CPF = 1.00**		
1.030	$ 262,650					
0.978	$ 249,390	$ 13,260	95.0%	97.8%	Proposed System (adjusted per tons remainin in failed sublot)	
0.900	$ 229,500	$ 33,150	87.4%	90.0%	Current Process (even if 1 ton remains in failed sublot)	

2024 - Limited Access IRI Project Overview

- 37 Projects
  - Lowest Average Project IRI = 35
  - Highest Average Project IRI = 69
  - (Average) Average Project IRI = 49
- 22 Projects Received Incentive
  - Average Incentive/Disincentive = $233 per lane mile
  - Highest Average Incentive = $1,874 per lane mile
  - Greatest Average Disincentive = -$2,797 per lane mile
- 1 Project Received 3% Consistency Bonus
  - All LOTs ≤ 55

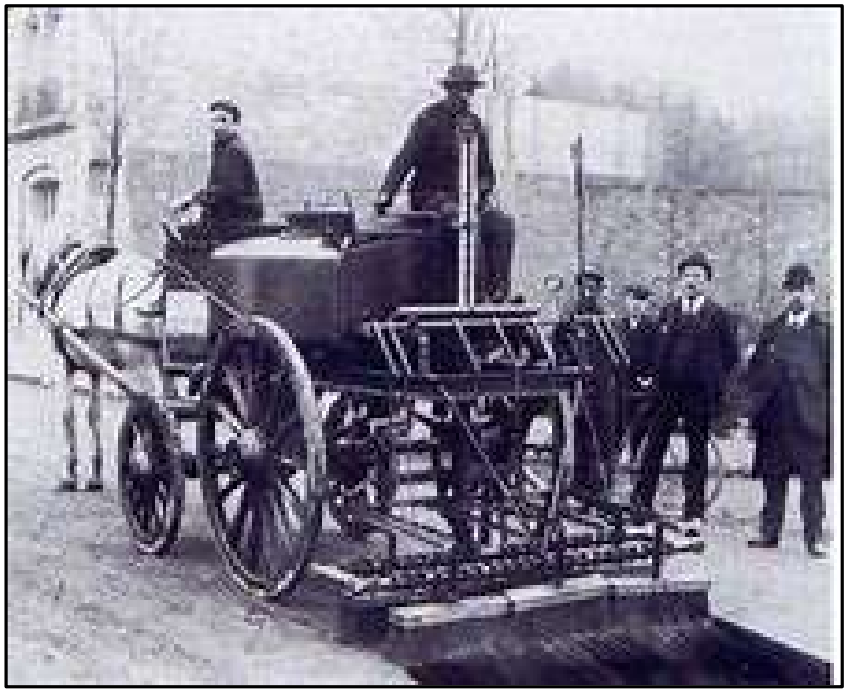
2025 - Limited Access IRI Project Overview

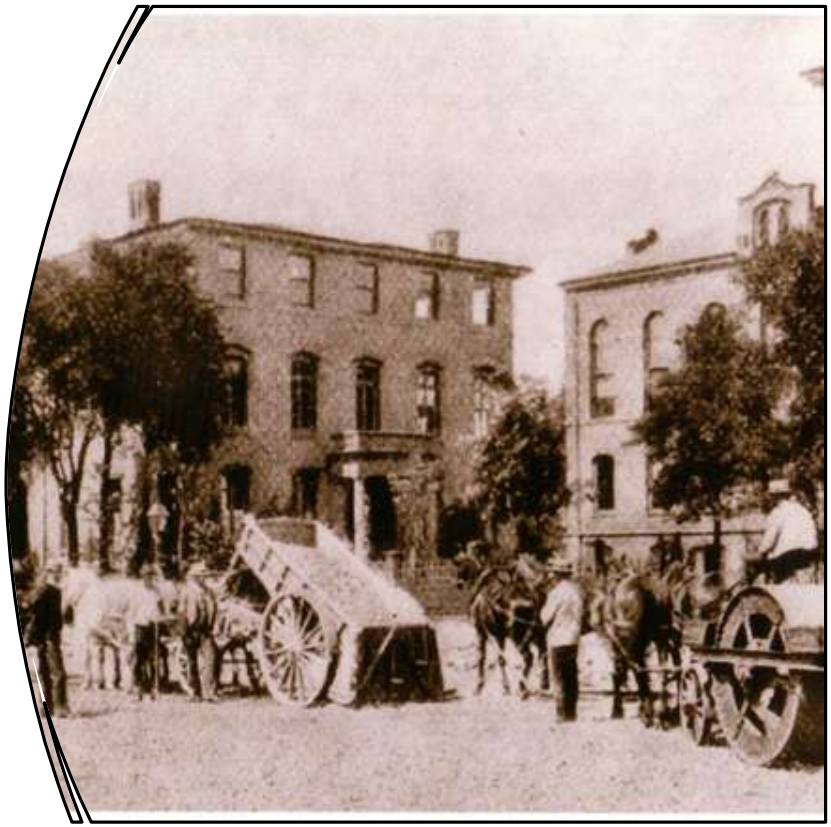
- 27 Projects
  - Lowest Average Project IRI = 32
  - Highest Average Project IRI = 71
  - (Average) Average Project IRI = 46
- 16 Projects Received Incentive
  - Average Incentive/Disincentive = $231 per lane mile
  - Highest Average Incentive = $1,945 per lane mile
  - Greatest Average Disincentive = -$2,809 per lane mile
- 2 Projects Received 3% Consistency Bonus
  - All LOTs ≤ 55

Non-Limited Access IRI Smoothness Projects

Class	FIN	District	SR	Avg IRI	Min IRI	Max IRI	Total Incentive	Lane Miles	Incentive/LM	Pilot Project, IRI Added, etc.
5	44780615201	6	5	98	59	150	$ 690.80	4.289	$ 161.06	Pilot Project
3	43914215201	5	44	46	29	68	$ 10,583.60	8.952	$ 1,182.26	Pilot Project
3	44290615201	5	400	38	26	54	$ 11,613.80	6.229	$ 1,864.47	Pilot Project
3	44381515201	5	40	38	24	66	$ 45,970.20	24.495	$ 1,876.72	Pilot Project
2	44520815201	5	600	46	30	88	$ 876.20	4.325	$ 202.59	Pilot Project
4	44521715201	5	326	62	37	120	$ 11,642.40	16.703	$ 697.02	Pilot Project
2	43630815201	4	84	53	49	56	$ (20.00)	0.6	$ (33.33)	Pilot Project
4	44609715201	4	710	59	44	85	$ 4,822.60	5.076	$ 950.08	Pilot Project
4	44610215201	4	15	78	52	123	$ (6,972.00)	12.62	$ (552.46)	Pilot Project
4	44611215201	4	76	57	35	85	$ 4,453.80	3.695	$ 1,205.36	Pilot Project
3	44617115201	4	15	62	34	101	$ (15,207.60)	23.242	$ (654.32)	Pilot Project
2	43775815201	3	369	35	30	58	$ 4,407.40	3.242	$ 1,359.47	Pilot Project
3	44575915201	3	30	42	27	65	$ 34,135.20	20.456	$ 1,668.71	Pilot Project
3	44125915201	2	26	57	33	102	$ (2,855.00)	12.87	$ (221.83)	Pilot Project
4	44540215201	2	47	56	32	101	$ 27,864.00	25.574	$ 1,089.54	Pilot Project
3	44543615201	2	121	43	32	70	$ 28,013.00	17.585	$ 1,593.01	Pilot Project
4	44717615201	2	21	44	29	68	$ 10,986.00	5.913	$ 1,857.94	Pilot Project
3	44155015201	1	45	59	32	89	$ (2,101.60)	7.721	$ (272.19)	Pilot Project
2	44156015201	1	681	44	28	84	$ 6,307.20	13.183	$ 478.43	Pilot Project
4	44547315201	1	70	52	33	87	$ 30,775.80	22.043	$ 1,396.17	Pilot Project
3	44620815201	1	700	56	39	110	$ 542.20	19.456	$ 27.87	Pilot Project
3	44620915201	1	710	52	36	77	$ 1,996.20	4.707	$ 424.09	Pilot Project
4	44622815201	1	25	45	31	61	$ 12,246.00	6.533	$ 1,874.48	Pilot Project
2	44622915201	1	66	57	39	86	$ (12,258.40)	13.185	$ (929.72)	Pilot Project
4	40527015201	7	700	56	37	81	$ 3,362.00	2.819	$ 1,192.62	IRI Added
3	40527035201	7		93	57	140	$ (5,929.20)	2.04	$ (2,906.47)	IRI Added
5	44381515201	5	40	38	24	66	$ 31,121.00	24.5	$ 1,270.24	IRI Added
4	44519015201	5	35	52	34	80	$ 5,450.00	3.898	$ 1,398.15	IRI Added
3	44529415201	5	40	52	30	82	$ 5,644.00	11.92	$ 473.49	IRI Added
2	43811715201	4	84	50	33	99	$ (1,240.00)	7.6	$ (163.16)	IRI Added
2	43811715201	4	84	51	35	104	$ (1,480.00)	7.6	$ (194.74)	IRI Added
3	44163115201	4	25	64	34	129	$ (44,220.00)	46.459	$ (951.81)	IRI Added
2	44559015201	3	89	59	39	114	$ (32,807.00)	26.199	$ (1,252.22)	IRI Added
2	42293855201	2	15	80	49	116	$ (7,830.20)	2.774	$ (2,822.71)	IRI Added

New Ideas, Equipment, Methods, & Technologies



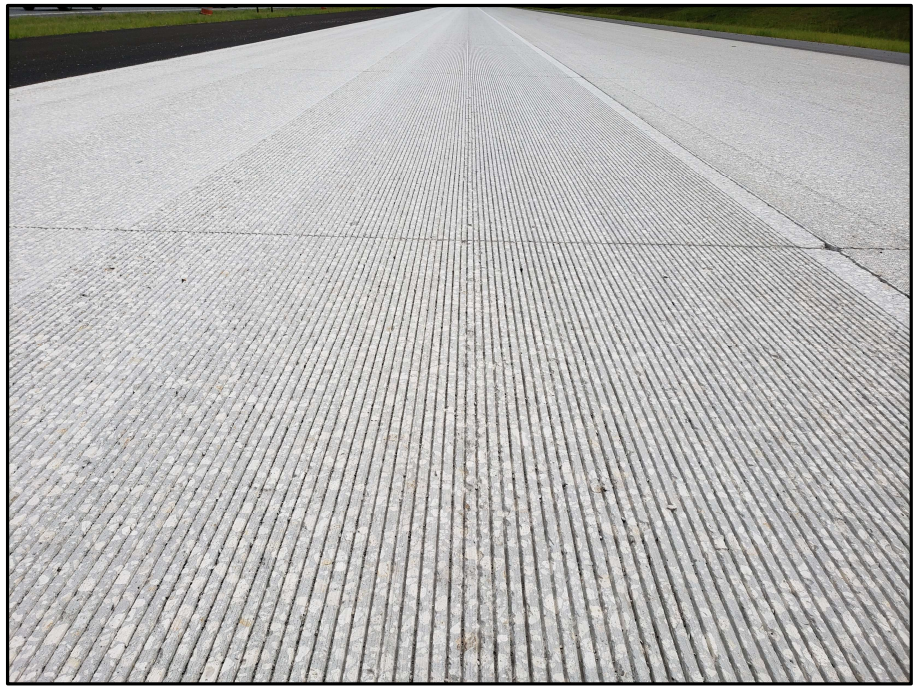


Longitudinal Grooving
Dense-Graded Friction Course

- Longitudinal Grooving Increases Friction, Macrotexture, & Hydroplaning Resistance
- Alternative to FC-5
- Eliminate Raveling & Increase Pavement Life
- Pilot Projects Underway

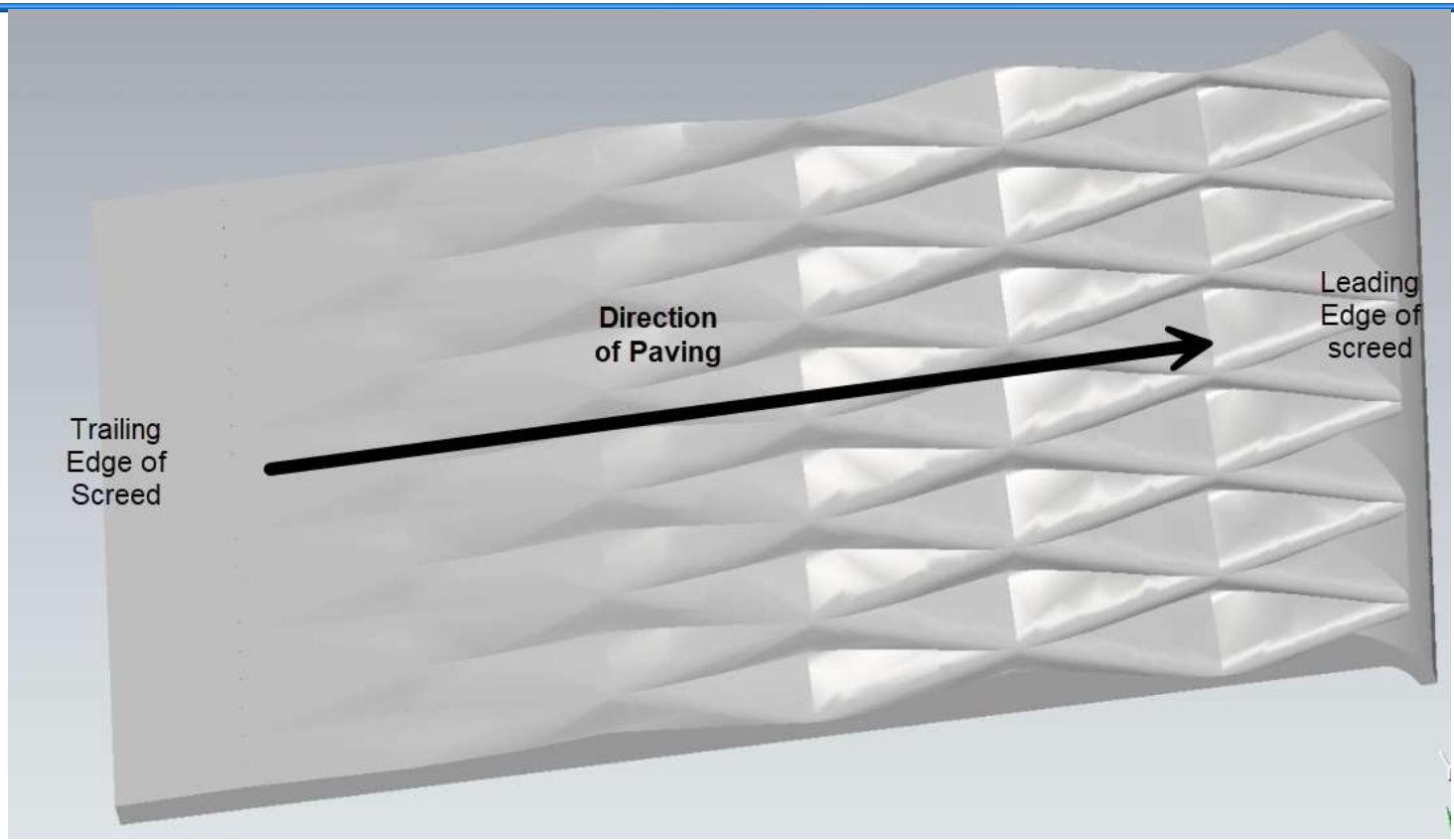
Longitudinal Grooving
Dense-Graded Friction Course

- Grooving Projects Let
  - SR 60 - T1892 - Ajax Paving
    - From W of Saddlebag Lake Rd to E of Tiger Lake Rd
  - I-110 Ramps - T3949 - CWR
    - From SR 30 (US 98) to SR 8 (I-10)
- To Be Let FY 2026
  - US 19
    - From S of Tampa Rd to S of Live Oak St



SDX Paver Screed

- SDX Screed's Texture Compacts Asphalt More Than Standard Screed

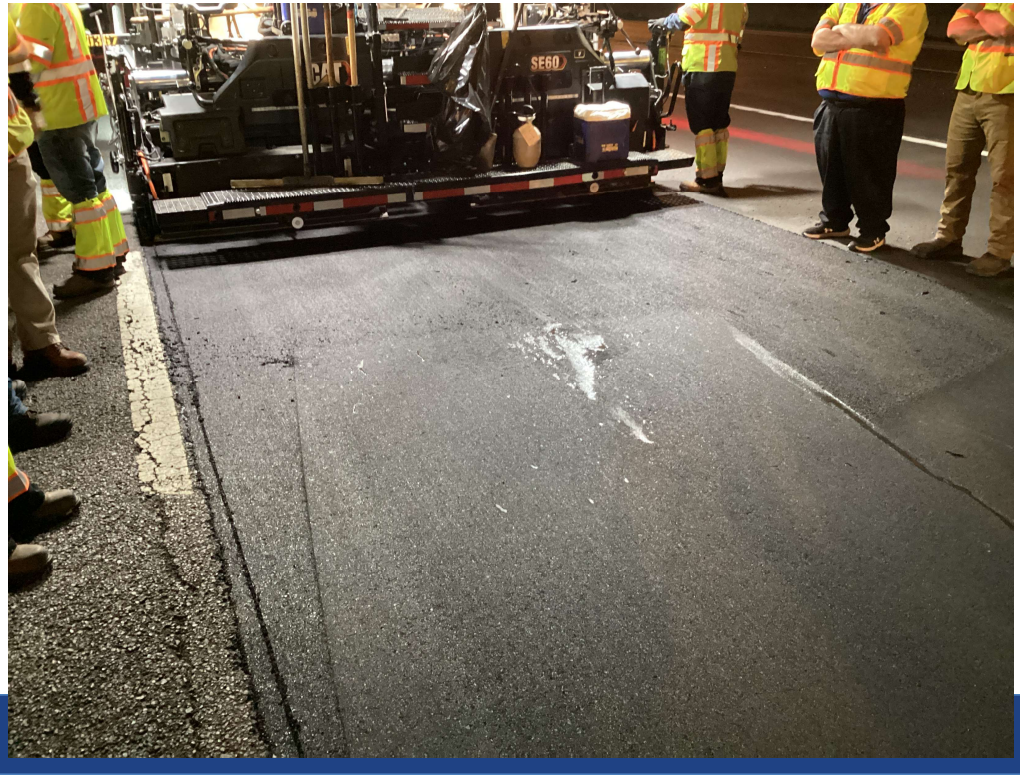


SDX Paver Screed on I-4

- 91% Density Behind Screed (Prior to Roller Compaction)
  - End of Low Density Failures?
- 92%-93% with Couple Static Compaction Coverages

SDX Paver Screed on I-4

- Half the Rolldown (~1/8” per inch)



SDX Paver Screed

- Slight Line Texture
- Smooth Compacted Mat After Rolling

SDX Paver Screed Use on OGFC (FC-5)

- Slightly Visible Lines
- Smooth Pavement
- No Segregation or Texture Concerns
- Looks More Compacted & More Uniform
- **Is It More Durable?**
- **Last Longer?**
- **Less Susceptible to Raveling?**
- **How Do We Promote Use w/o Writing Means & Methods Specifications?**
  - **FC-5 Density Spec?**

SDX Paver Screed

- I-4 (D7 – T7493)
  - Avg Project IRI when Paved Previously was 54 & 55 (two sections)
  - TPC Paved it with Average Project IRI of 39.9, significantly smoother
  - $62,921 Smoothness Incentive
- SR 23 (D2 – T2724)
  - New Road, No Previous IRI Data
  - Hubbard Paved it with Avg Project IRI = 35.1
  - $40,114 Smoothness Incentive

Automating Construction Inspection

- Obtain Construction Inspection Data from Construction Equipment
  - Started with Panel Discussion @ 2024 FTBA Construction Conference
  - Continuing with Automated Construction Inspection Team
- Phases
  - Collect Data & Location From Construction Equipment
    - Ex. Milled Cross Slope from Milling Machine
  - Provide Data in Report Format
    - Submit Instead of Current FDOT Form
  - View Data/Report on an App (Smart Phone, Tablet, Computer)
  - View Data in App in Real Time - As Milling & Paving occurs

Automating Construction Inspection

- Ajax, OnGrade, Caterpillar, Haul Hub, OnStation, & FDOT Working to Collect Milled Cross Slopes on a Project
- End Goal is to Reduce/Eliminate Manual Measurements
  - Increase Safety by Reducing Time Inspectors Near Equipment
- Real Time Inspection Data
  - Inspectors Can Evaluate Cross Slopes & More Quickly Communicate With Crew,
    - Rather Than Spending All Their Time Measuring & Collecting Data
  - Allows Milling & Paving Crews to Check App & Make Corrections Sooner
  - Allows Off-Site Oversight

Overbuild Tables

- Putting Together Team to Improve Overbuild Tables
  - Look to Meet in August
  - Contractors, CEI's, Designers, & FDOT Personnel from Design & Construction
- Are Contractors Seeing Issues with…
  - Overbuild Overruns on Projects?
  - Quality of Overbuild Tables?
  - Different Levels of Information Provided in Overbuild Tables?

PrePave Meeting Agenda

- Concerns About
  - Time Spent at PrePave Meetings
  - Value of Some Agenda Items
- Worked with Districts & Contractors
- Ensure
  - PrePave Meeting Covers Project-Relevant Topics
  - Entire Meeting Has Value
  - Time Well Spent
- Removed Agenda Items
  - Covered in Standard Specifications
  - Means & Methods
  - Don't Impact Project or Project Decisions

(16) Asphalt Operations [Discuss the importance of constant communication between the Quality Control Manager, the Department's Project Administrator and Verification Technician for quality reporting, placement, and payment. Review Automated Quality Control Roadway Report. Inform the Contractor that prior to any paving operation another meeting must be held. The QC Plan, QA/QC specifications, core frequency and handling of the cores, frequency for covering the milled surface, cross slope correction, and smoothness will be discussed.

The Contractor will attend this meeting and present the following material:

(a) The proposed starting date of the paving operations

(b) The location of the asphalt plant(s) to be used

(c) Contact List / Escalation Matrix
While a Project Contact List/Matrix may already be established, ensure a Contact List/Escalation Matrix are shared for all paving operations, as well as plant mix production, sampling, & testing

(d) Discuss any project complexities, unique or challenging roadway geometry, MOT, or phasing, Non-Standard Milling, Non-Standard Paving, CSI's, any unique project conditions, etc.

(e) Discuss any Non-Standard Specifications (Dev Specs, SP's, MSP's, TSP's), Developmental Standard Plans, Pilot Project Documents (ex. new materials, new testing/acceptance methods, new construction equipment/operations, etc.)
Also discuss any recent changes to Standard Specifications

(f) Open Forum
Discuss any current topics or areas of concern not listed above that are worth mentioning
ex. end-of-load segregation, Safety

(g) **NOTE:** No paving operation will begin before a Pre-paving Conference is held to discuss the above items.]

QCRR Training

- Reviewing Data Entry & Importance of Correct Pay Item Info
  - Lift & Total Thickness of Asphalt Base
  - Identifying Asphalt Base as Required or Not
  - Identifying Overbuild
- Bituminous Certification
  - Automated Bituminous Adjustments & Certification Form
- Various Project Reports within QCRR
- Tips & Tricks

QCRR Training

- Completed Sessions
  - ~~D7 - May 12 & 13~~
  - ~~D3 - June 3 & 4~~
  - ~~D5 - June 12 & 25~~
- Upcoming Sessions
  - D2 - July 29, 30, & 31 – Jacksonville Office
  - D4 - Oct 8, 9, & 10
  - D6, D1, & Turnpike – To Be Determined

Design Constructability Training

- Working with Contractors to Provide Design Constructability Training & Discussions
  - Combining Equipment Sessions & Contractor Constructability Discussions We Had at Past Transportation Symposiums
- Milling & Paving Equipment & Paving Demo
  - Show & Discuss Capabilities & Limitations of Equipment
- Discuss Design Constructability Recommendations & Best Practices
- Looking to Have First One October 28 or 29 in D2 (Lake City)
  - Will Plan Additional Events in Other Districts

Questions?

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