BTS/BPD AASHTOWare and Specifications

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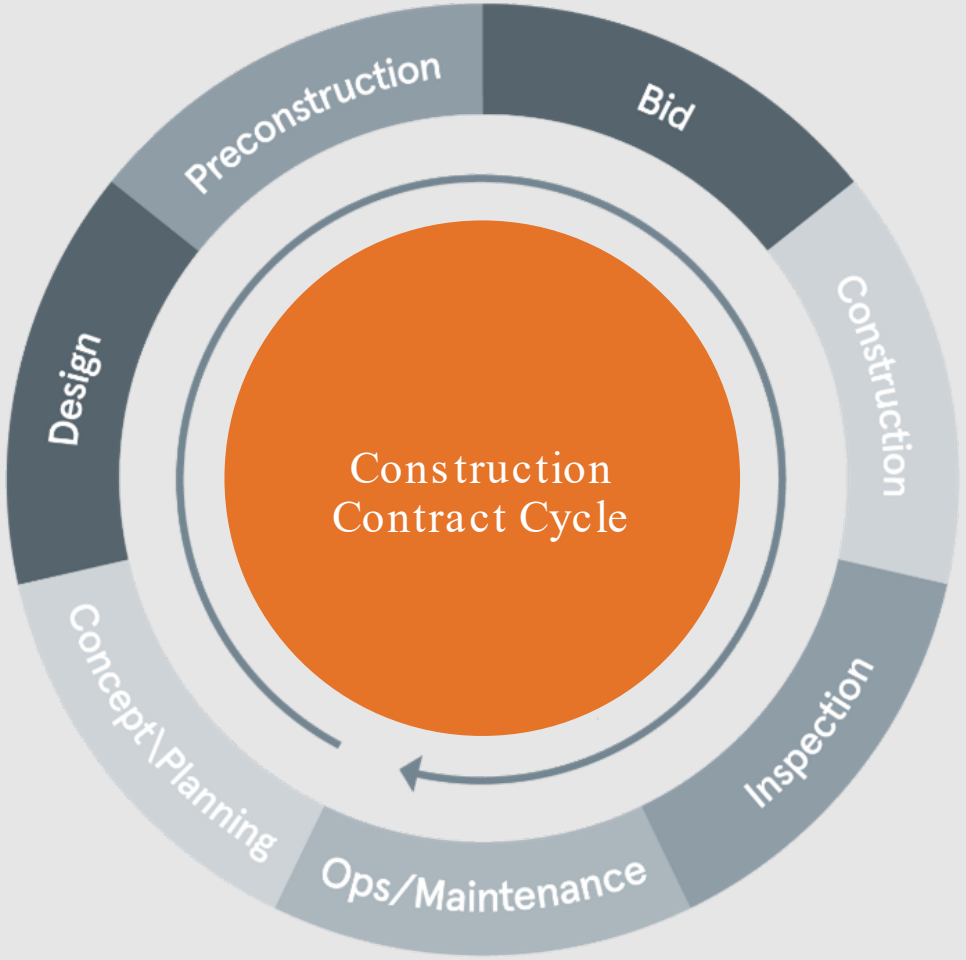
WAPA Annual Conference
Wisconsin Dells

December 2nd, 2025

What is AASHTOWare Project

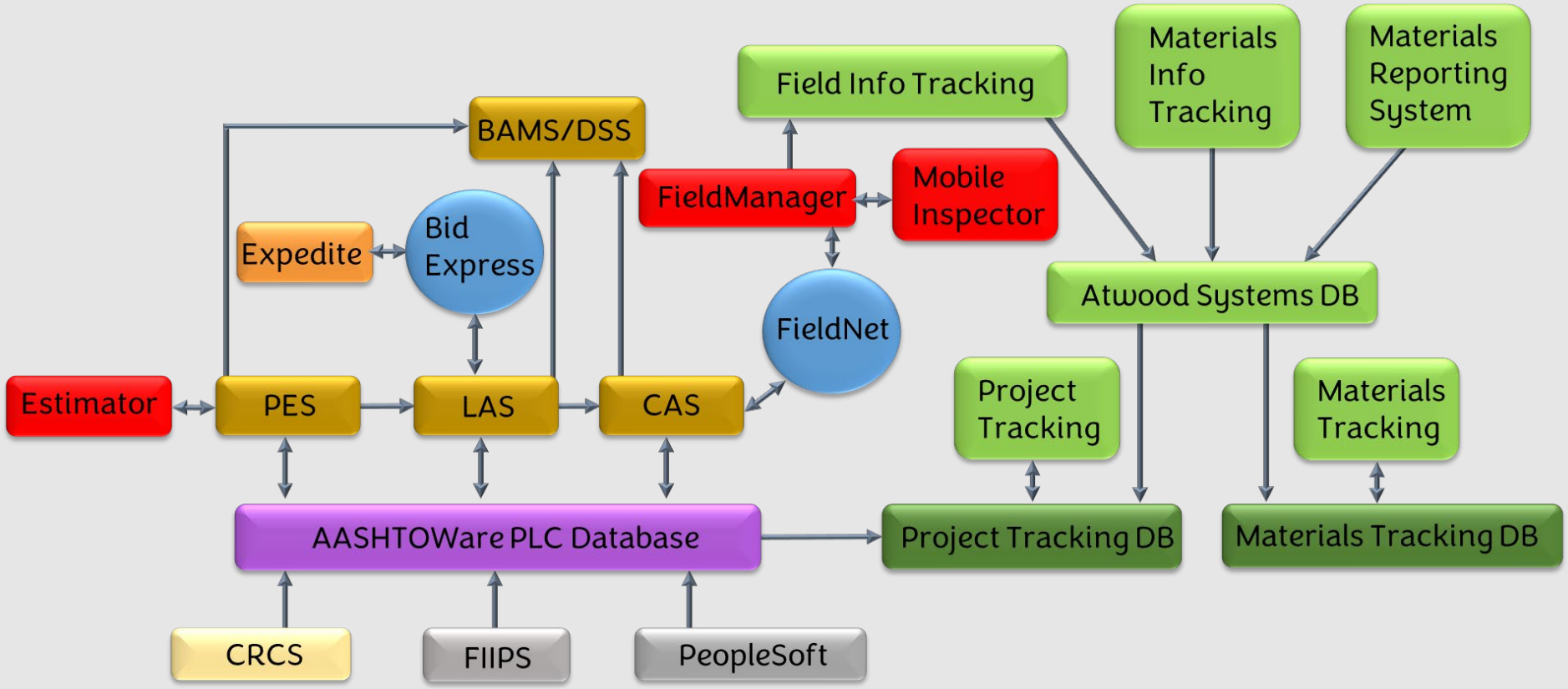


- Web-based enterprise system
- Used by 42 states
- Managed by DOT task force
- Consists of 6 integrated modules
  - AWP Estimation
  - AWP Preconstruction
  - AWP Project Bids
  - AWP Civil Rights & Labor
  - AWP Construction & Materials
  - AWP Data Analytics

Why AASHTOWare Project?

- Software belongs to the user (DOT)
- Modern, secure platform
- Operable with other modules and other agency applications
- Cost effective
- Enhances collaboration with peer agencies
- Integrated with electronic bidding

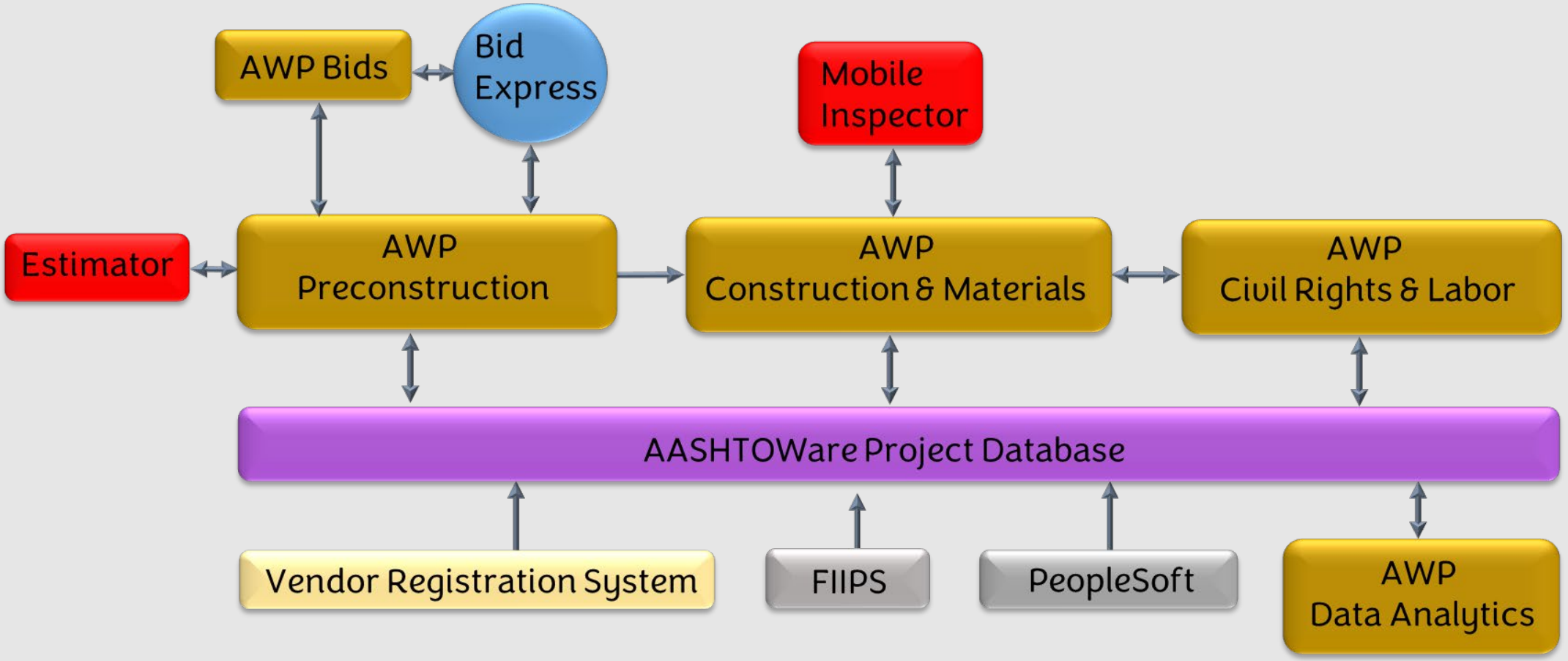
WisDOT Contract Management System: Pre-2016



PES - Proposal and Estimates System
LAS - Letting and Awards System
CAS - Construction Administration System

BAMS/DSS - Decision Support System
FIIPS - Financial Integrated Improvement Programming System
CRCS - Civil Rights Compliance System

WisDOT Contract Management System: Future



AWP – Materials Pilot Projects 2026

- Pilot Projects for 2026 Construction – Listed in November 2025 Letting
  - SWR, 1690-04-62/1690-04-73, USH 51
  - NCR, 1140-00-77, USH 45
  - NER, 9180-35-71, STH 22

Pilot Project Special Provisions

STSP'S Revised July 1, 2025

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1690-04-62, Monroe – New Glarus, Bushnell Creek to Cow Path Lane, and Project 1690-04-73, Monroe – New Glarus, Wittenwyler Rd & CTH C Intersections; both projects on STH 69, Green County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2026 Specification Reorganization Pilot Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20250701)

9. Notice to Contractor, Mandatory Training.

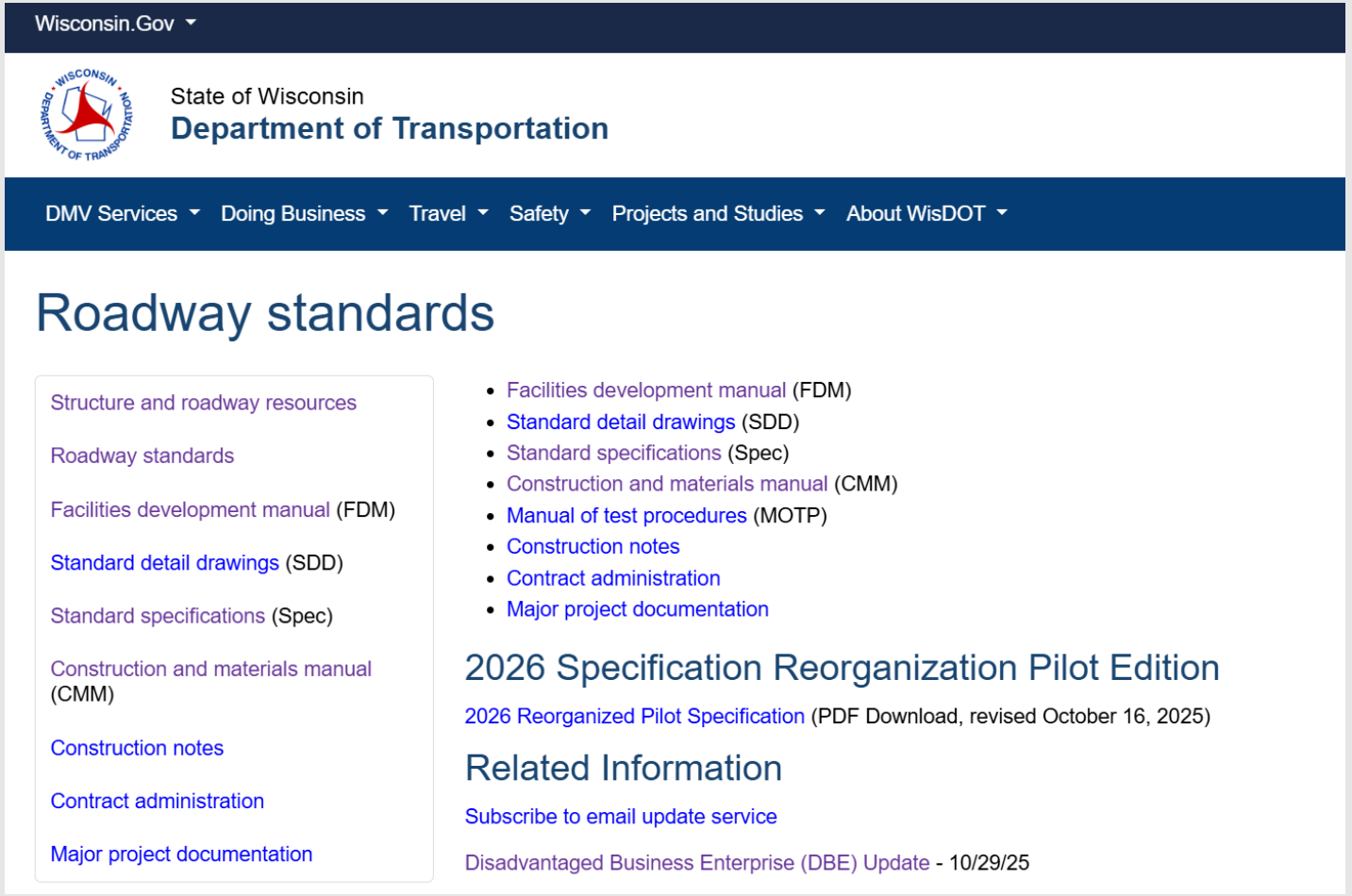
Participate in department-sponsored mandatory AWP and specification reorganization training. Ensure that representatives of subcontractors also participate in those meetings if engineer requests. Participation in the mandatory training is considered incidental and no separate payment will be made for participating in the training.

2026 Reorganized Specification

STATE OF WISCONSIN

STANDARD SPECIFICATIONS
FOR
HIGHWAY AND STRUCTURE
CONSTRUCTION

2026 Specification Reorganization Pilot Edition



Reorganized Specification - Future

- 2025 Standard Specification
- Pilot Projects for 2026
- Pilot Projects for 2027
- 2028 Standard Specification

AASHTOWare Project (AWP) - Materials Module

- Why are we doing this?
  - AASHTOWare Preconstruction and Construction modules are in use already.
  - Timely submittal of material testing results and documentation is a key factor for success
  - One stop shop for all construction material tracking and reporting systems
    - MRS, MIT, MTS, MIT, and HQMS will be combined into AWP
  - Only applies for 3 pilot projects

AASHTOWare™ PROJECT

2026 Specification Reorganization Pilot Edition

- All Material specifications (x.2) move to Part 7
  - Materials related specs in x.3 (Construction), CMM, APL and SDD move to Part 7
- A summary table of Material Acceptance method
- Published in WisDOT Roadway standards
- Be familiar with interpreting new specification

TABLE 701-1 AGGREGATE ACCEPTANCE

SPEC	MATERIAL NAME	PRE-PROJECT	PROJECT
701.1	Definitions	--	--
701.2	Aggregate Source Approval	APL	--
Backfill			
701.3	General	--	--
	Granular Backfill	--	DST
	Structure Backfill	--	DST
	Culvert Pipe Backfill		
	Foundation	--	MTR, DST
	Trench	--	FI/VI
	Storm Sewer Backfill		
	Foundation	--	MTR, DST
	Trench	--	DST
Base, Subbase, and Subgrade Aggregates			
701.4	General	--	--
	Aggregate Classifications	--	--
	Dense-Graded and Open-Graded Base	APL	QMP, DST
	Subbase	--	DST
	Breaker Run	APL	FI/VI
	Select Crushed Material	APL	FI/VI
	Pit Run	APL	FI/VI
701.5	Slope Paving Aggregates	--	CRT [1]
701.6	Riprap Stone	--	FI/VI

Existing Specifications/Special Provisions	Pilot Specification
450 General Requirements…	450 General Requirements…
455 Asphaltic Materials	455 Tack Coat
460 Hot Mix Asphalt Pavement	465 Asphaltic Surface
465 Asphaltic Surface	703 Asphaltic Binders and Emulsions
STSP 460-020 QMP HMA Pavement Nuclear Density	704 Asphalt Additives
STSP 460-030 SMA Pavement	705 Asphalt Mixtures
STSP 460-040 HMA PWL Test Strip	
STSP 460-050 HMA Pavement PWL	
STSP 460-075 HMA Pavement Longitudinal Joint Density	

TABLE 705-1 ASPHALT MIXTURE ACCEPTANCE

SPEC	MATERIAL NAME	PRE-PROJECT	PROJECT
Asphalt Mixtures			
705.1.1	Asphalt Mixture Design Requirements	APL, DST, MISC[1], MTR	--
Mixture Acceptance Programs			
705.1.2	General Requirements for Asphalt Mixture Testing	APL	QMP
705.1.3.1	HMA and SMA Volumetric Test Strips	APL	QMP
705.1.3.2	Percent Within Limits	APL	QMP
705.1.3.3	Percent Within Limits Lite	APL	QMP
705.1.3.4	Department Acceptance	APL	QMP
705.1.3.5	Small Quantities	APL	FI/VI
705.1.3.6	Temporary Pavements	--	--
Density Acceptance Programs			
705.1.4	General Requirements for Asphalt Density Testing	APL	QMP
705.1.5.1	Nuclear Gauge Correlation Strip	APL	QMP
705.1.5.2	Percent Within Limits	APL	QMP
705.1.5.3	Department Acceptance	APL	QMP
705.1.5.4	Small Quantities	APL	FI/VI
705.1.5.5	Temporary Pavements	--	--
Miscellaneous Asphalt Mixtures			
705.2	Asphaltic Surface	APL	--
705.3	Cold Patch	--	FI/VI
705.4	Seal Coat Aggregate Mixture	APL	--

[1] Submit a mix design to the department according to the requirements in the respective section below.

Misc. Quantities – Use Table

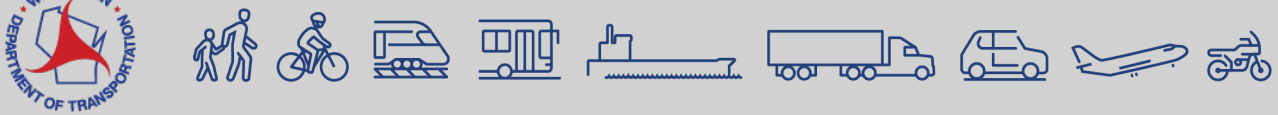
LOCATION	ROADWAY	STATION	MIXTURE USE:	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
								MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
DRIVING LANES 12-FOOT	USH 45 NB/SB MAINLINE	802+50 to 1074+03	LOWER LAYER	BASE AGGREGATE	HMA PAVEMENT 3 MT 58-28 S	15980	3.5"	PWL	PWL CORES
DRIVING LANES 12-FOOT	USH 45 NB/SB MAINLINE	1074+03 to 1209+21	LOWER LAYER	BASE AGGREGATE	HMA PAVEMENT 3 MT 58-28 S	5920	3.0"	PWL	PWL CORES
DRIVING LANES 12-FOOT	USH 45 NB/SB MAINLINE	802+50 to 1209+21	LOWER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 3 MT 58-28 S	12390	2.25"	PWL	PWL CORES
DRIVING LANES 12-FOOT	USH 45 NB/SB MAINLINE	802+50 to 1209+21	UPPER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 4 MT 58-28 S	9290	1.75"	PWL	PWL CORES
3-FOOT SHOULDERS	USH 45 NB/SB MAINLINE	802+50 to 1209+21	LOWER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 3 MT 58-28 S	1700	2.25"	PWL	DEPARTMENT ACCEPTANCE CORES
3-FOOT SHOULDERS	USH 45 NB/SB MAINLINE	802+50 to 1209+21	UPPER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 4 MT 58-28 S	1320	1.75"	PWL	DEPARTMENT ACCEPTANCE CORES
INTERSECTIONS	USH 45 NB/SB MAINLINE	802+50 to 1209+21	LOWER LAYER	BASE AGGREGATE	HMA PAVEMENT 3 MT 58-28 S	5720	3.5"	PWL	DEPARTMENT ACCEPTANCE CORES
INTERSECTIONS	USH 45 NB/SB MAINLINE	802+50 to 1209+21	LOWER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 3 MT 58-28 S	3680	2.25"	PWL	DEPARTMENT ACCEPTANCE CORES

Acceptance Programs

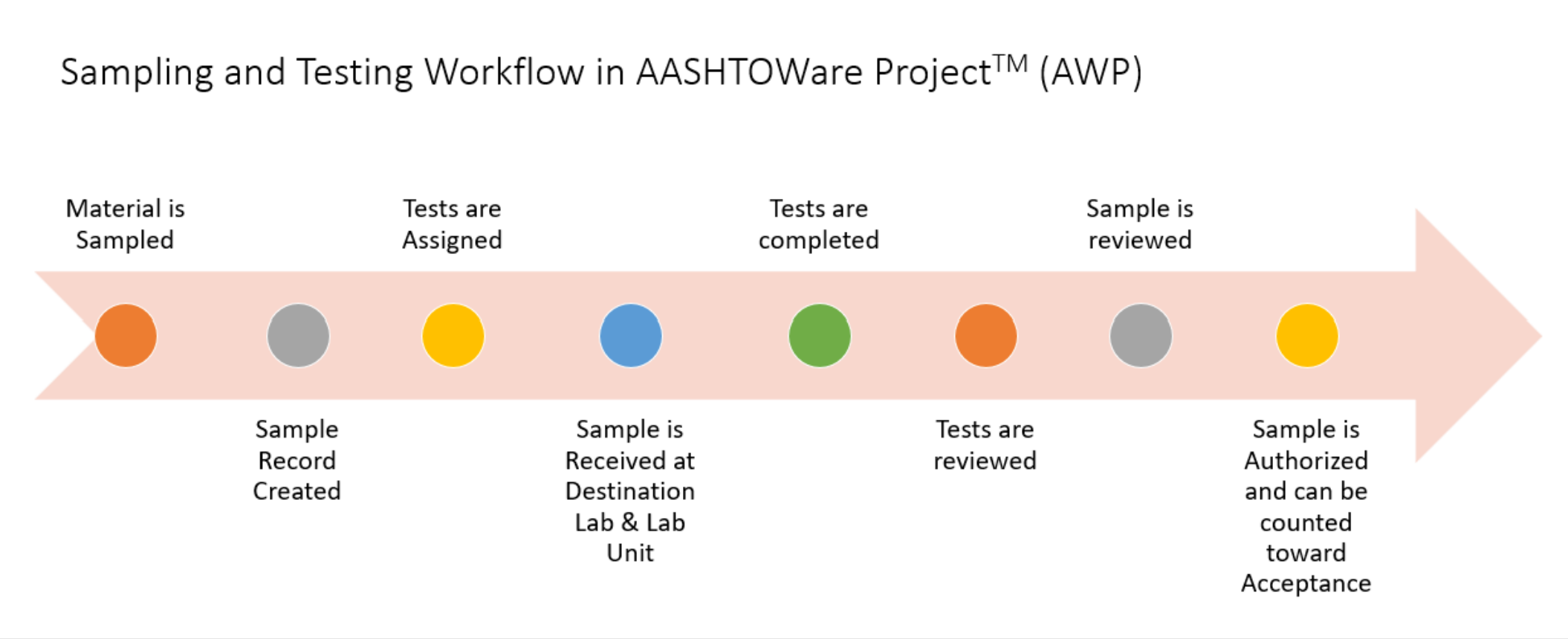
Mixture Acceptance	Density Acceptance
Percent Within Limits	Percent Within Limits
Percent Within Limits Lite	Department Acceptance
Department Acceptance	Small Quantities
Small Quantities	Temporary Pavements
Temporary Pavement	

AWP-Materials Modules

- Web-based application connected to the AASHTOWare Construction Module
- Contractors and consultants should create an AASHTOWare account to enter data
- Appropriate role will be assigned to the account holder.
  - AASHTOWare-Materials will be customized by the assigned role.
  - Example of Roles: Project Engineer, Lab Personnel, Contractor



AWP Workflow for Contractors



Roles

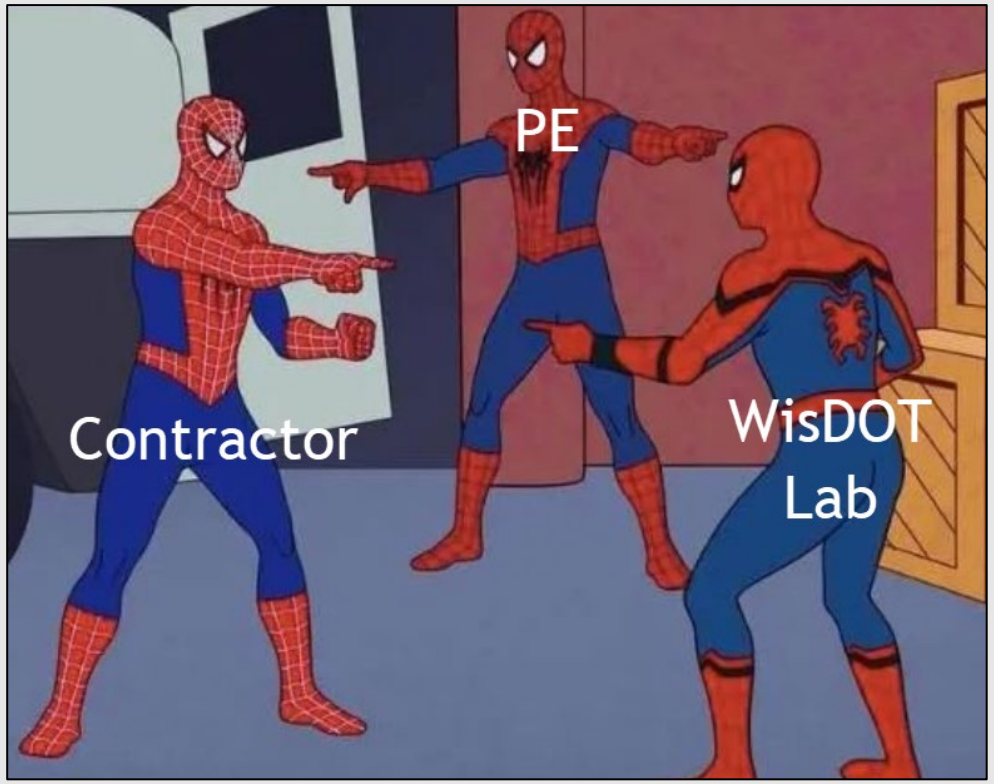
- Roles:
  - Determined by user's function on project
  - Limited by user's qualifications
    - Only HTCP Certified Techs can enter test results
  - AWP contains current HTCP certification records (updated daily)

- AWP role may not match contractual duties!

Material-Related Roles

Current AWP-M Roles:

- WisDOT/Consultant
  - Project Engineer (PE)
  - Lab Personnel
- Contractor
  - Lab Manager
  - Sampler & Tester



WisDOT/Consultant Responsibilities

- PE Role (PDS Project Manager/Project Engineer)
  - Generate material sets & acceptance actions
  - Create QV sample records and send to destination lab
    - Enter QV sample field test results
  - Create sample record for Wisconsin Materials Diary Entry (WMDE)
  - Review QV & QC sample records
  - Create Daily Work Reports (DWR)
  - Generate pay estimate & review material exceptions

WisDOT/Consultant Responsibilities (con't)

- WisDOT Lab Personnel Role
  - Create QV sample records and send to destination lab
    - Enter QV Sample Field Test Results
  - Create Wisconsin Materials Documentation Entry (WMDE)
  - Receive sample at destination lab
  - Enter test results
  - Review test results

Contractor Responsibilities

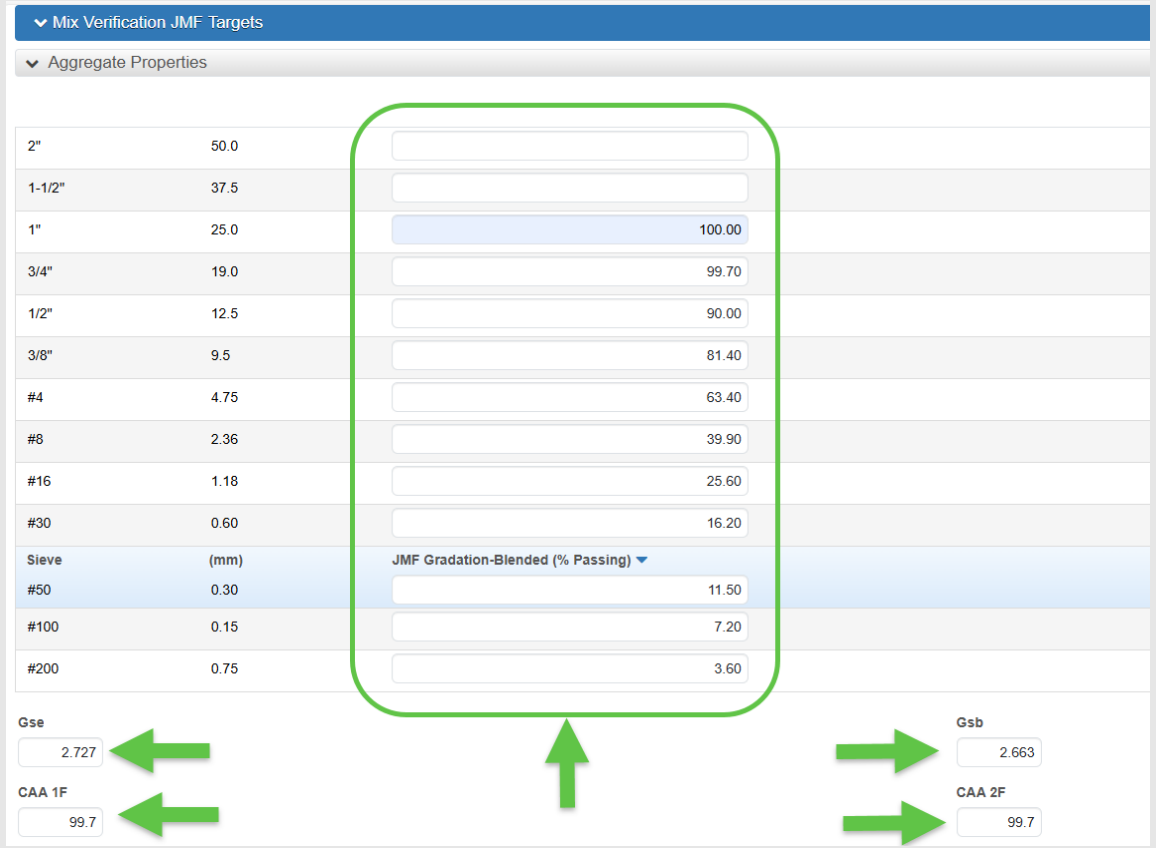
- Lab Manager Role
  - Maintain the list of lab personnel assigned to each contractor lab
  - Create sample records
  - Review completed tests

Contractor Responsibilities (con't)

- Sampler & Tester Role
  - Enter Mix Designs (pilot projects only)
  - Create sample records
  - Enter test data
    - Field tests – Nuclear Density
    - Lab Tests – Volumetrics, AC%
  - Review completed tests

Asphalt Mix Designs for Pilot Projects

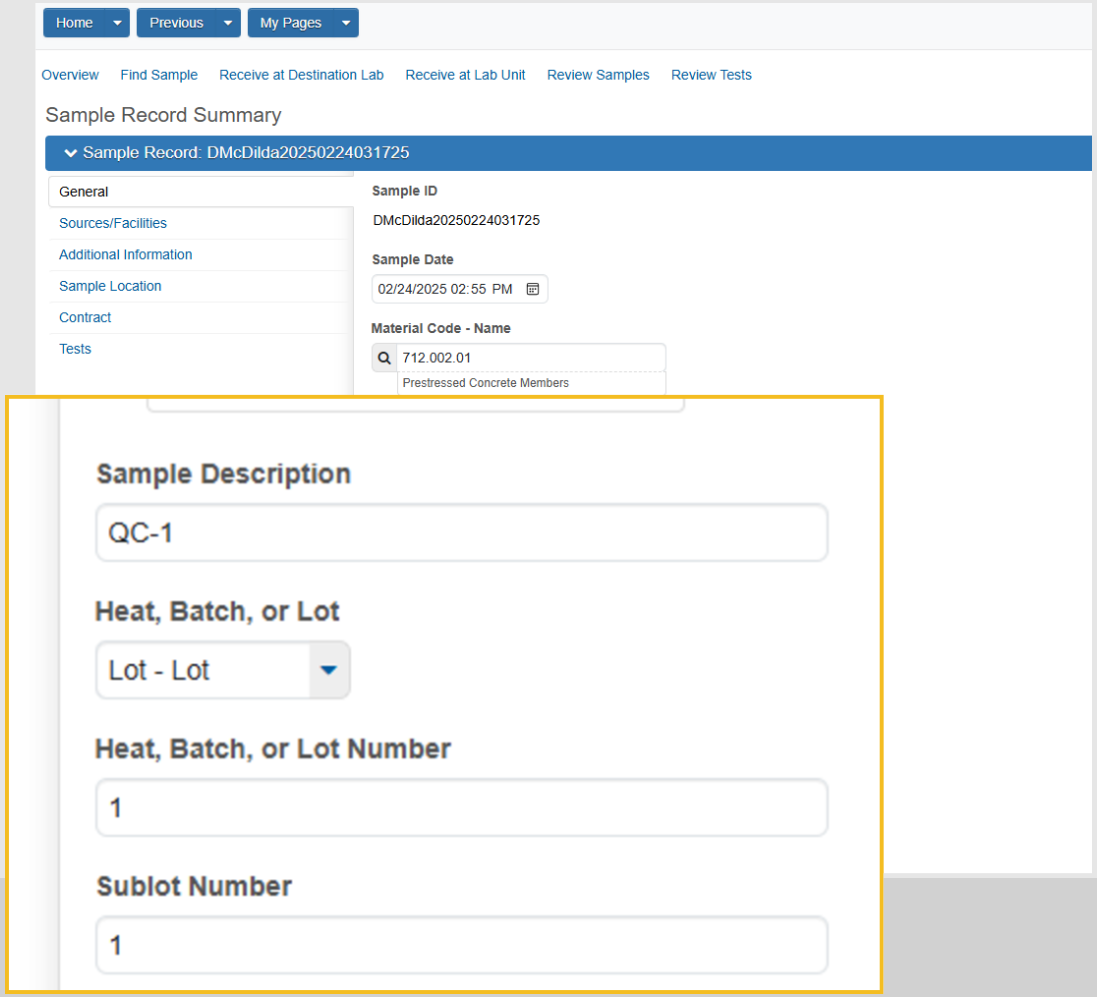
- Contractor enters MD data:
  - Mix type, NMAS, Binder Grade
  - JMF Blended Gradation
  - Gse, Gsb, CAA
  - Optimum AC%
  - TSR
  - Additives
- PE verifies the MD is on the APL and "Activates" MD for use on contract



*In the future MD data entry will be automated and MD APL will be in AWP

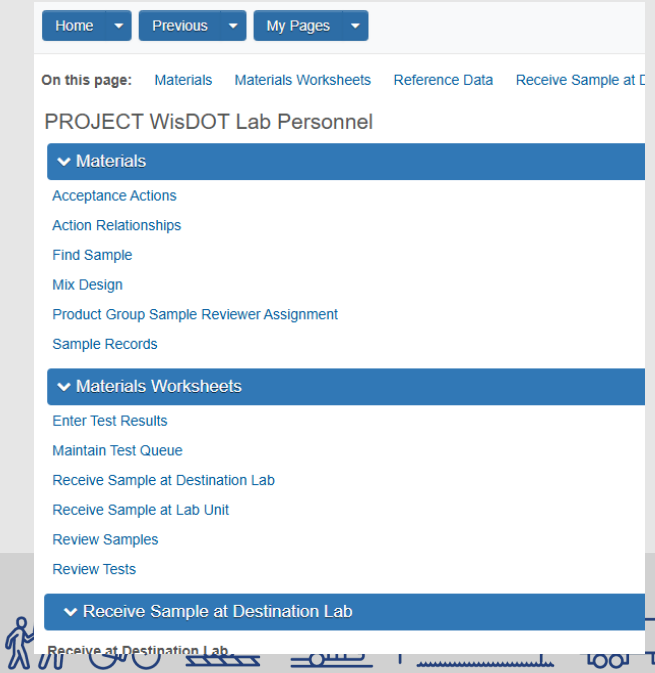
Sample Records

- Who: Sampler ID and destination lab
- What: Sample description
- When: Sample date
- Where: Location
- Why: Sample type (QC, QV, Dispute Resolution, etc.)



Materials Data

- AWP-Materials
  - Raw test data entered into AWP
  - Do we complete the # of tests/doc required?



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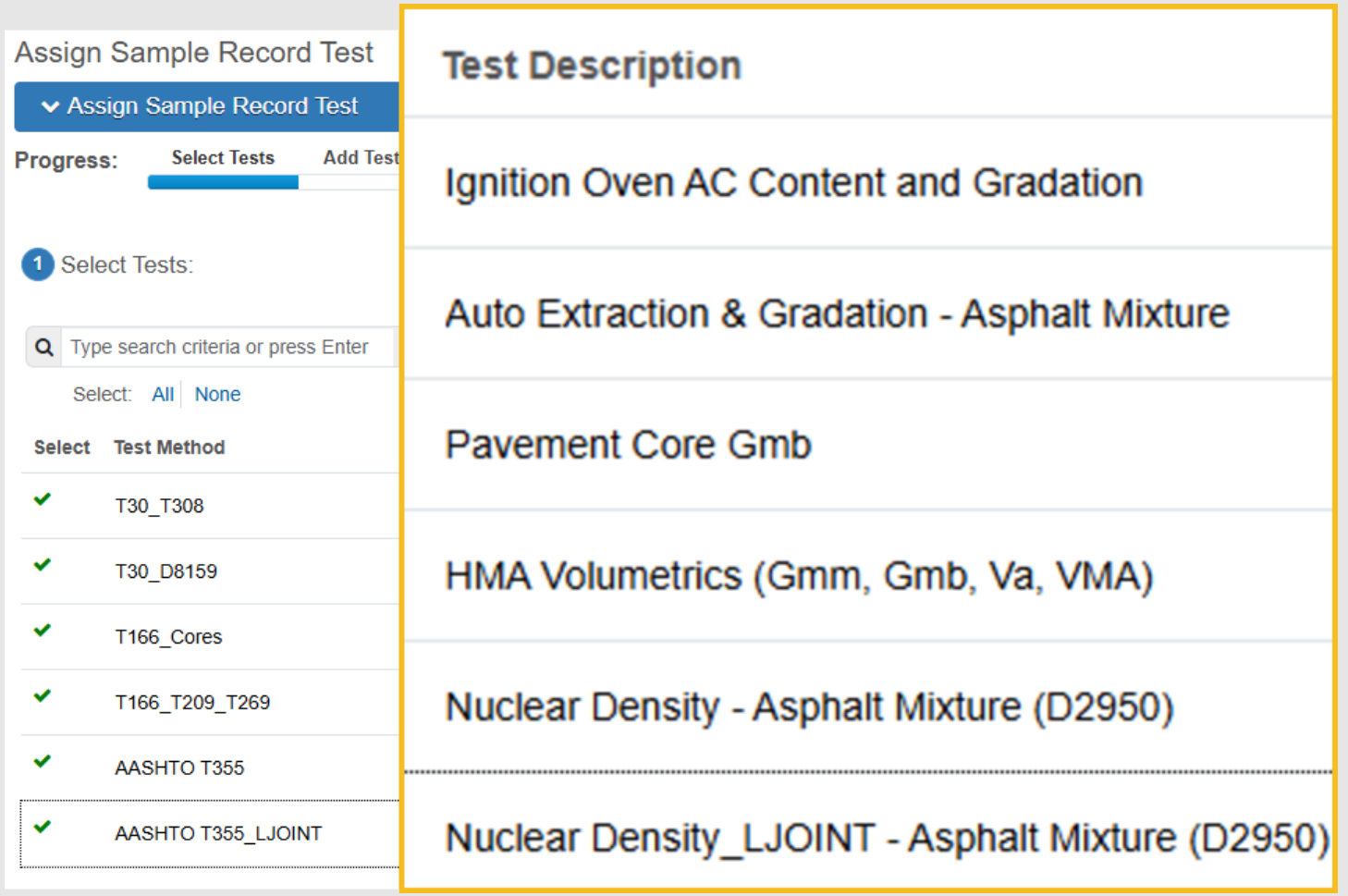
- Spreadsheets
  - Test results entered into spreadsheets
  - Is the material acceptable?
  - Should a price adjustment be applied?

1			Job No./Project ID:		10530484			Layer:	Lower	
2			WisDOT Mix No.:		0-250-0183-2025			Traffic Vol:	HT	
3			Mix Type:		4-HT-58-28-S			Density LSL(%):	93.0	
4	Sublot Widths will fill in automatically when Sublot Length is entered									
5	Lot Length	Sublot Length	Sublot Width	Date	Lot	Sublot	QC Tests (Avg: 95.7)	QV Tests (Avg: 94.6)	Dispute Resolution Cores	Dataset Used for Pay
36	7500	1500	12.0	7/18/2025	14	B	97.2			QC
37				7/18/2025	14	C	96.1			
38				7/18/2025	15	A	93.0			
39		1500	12.0	7/18/2025	15	B	97.1	95.7		
40				7/18/2025	15	C	96.0			
41				7/18/2025	16	A	96.4	97.2		
42		1500	12.0	7/18/2025	16	B	97.5			
43				7/18/2025	16	C	96.0			
44				7/18/2025	17	A	97.7			
45		1500	12.0	7/18/2025	17	B	97.7			
46				7/18/2025	17	C	95.3	95.3		
47				7/18/2025	18	A	94.1	94.2		
48		1500	12.0	7/18/2025	18	B	97.1			
49				7/18/2025	18	C	97.1			
50				7/18/2025	19	A	94.2			
57	The lot average for QC is different from the lot average for QV by more than 0.5%. Lot 2 qualifies for dispute resolution.The lot average for QC is different from the lot average for QV by more than 0.5%. Lot 3 qualifies for dispute resolution.									
58				7/18/2025	19	B	97.7	96.0		

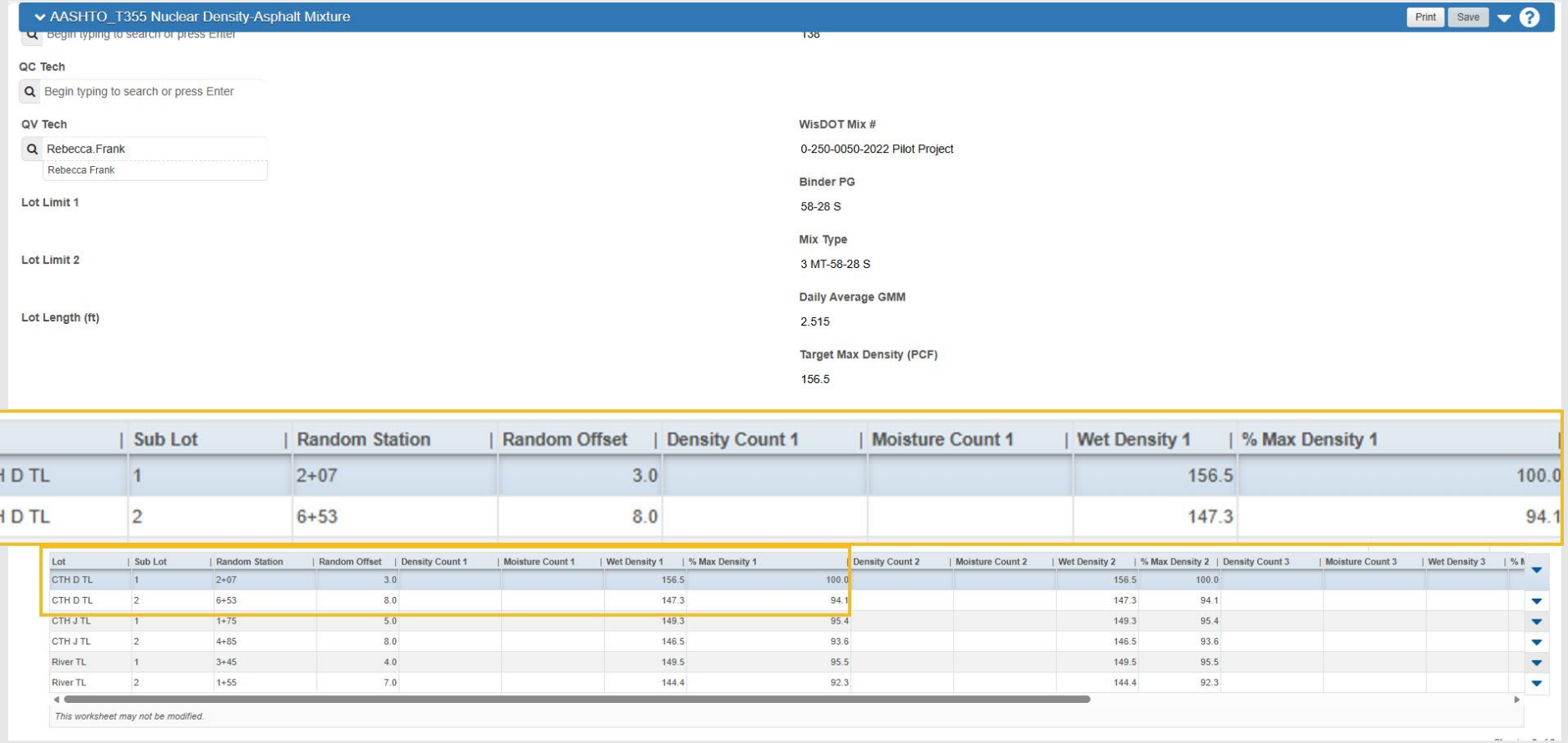
Assign Tests to Sample Record

- Each Sample Record can have multiple tests assigned to it
- Don't forget IRI Ride!
  - IRI data will be collected in separate spreadsheet



Data Entry: Nuclear Density

- Station
- Offset
- Wet Density
- % Gmm



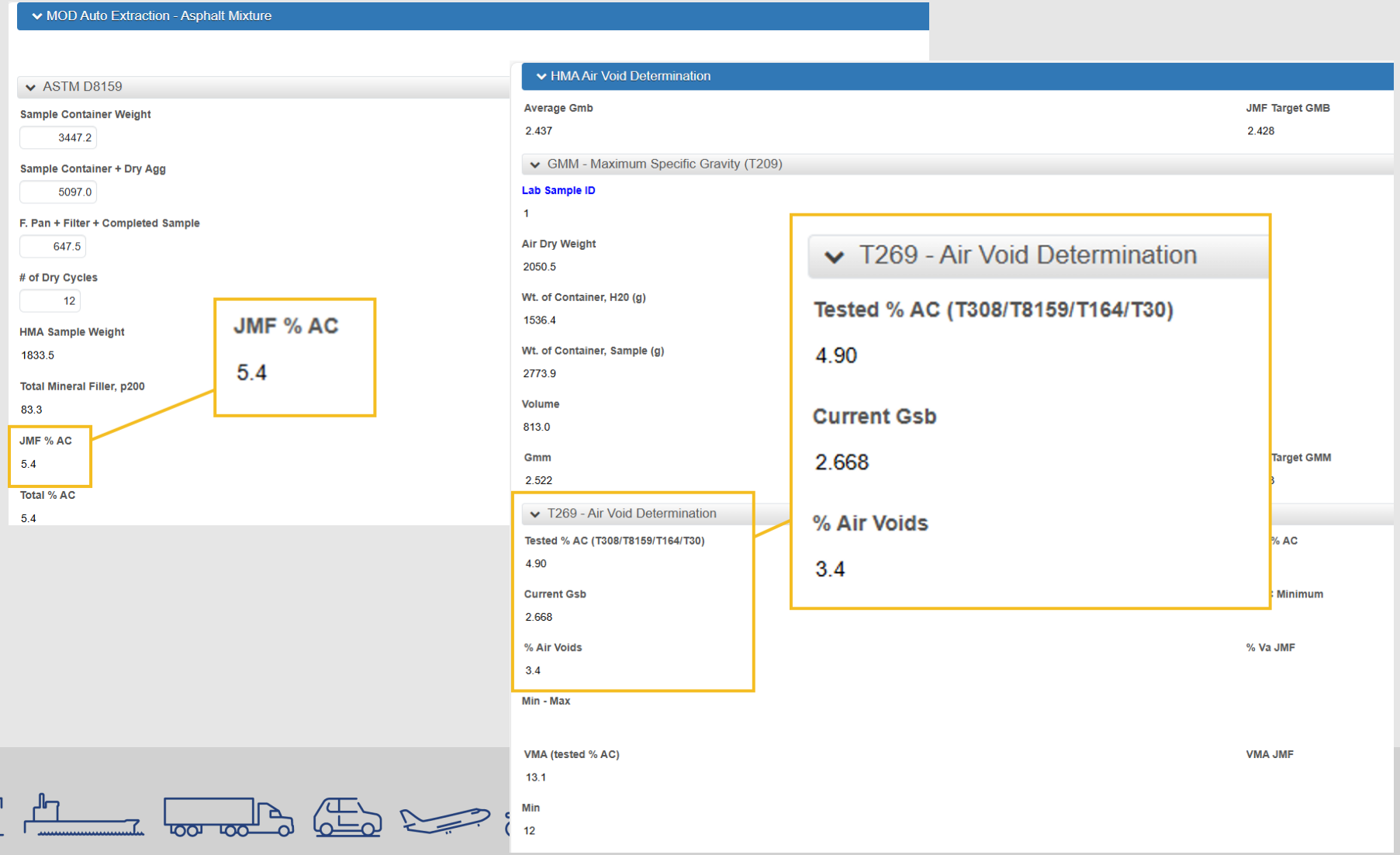
Lot	Sub Lot	Random Station	Random Offset	Density Count 1	Moisture Count 1	Wet Density 1	% Max Density 1
CTH D TL	1	2+07	3.0			156.5	100.0
CTH D TL	2	6+53	8.0			147.3	94.1

Lot	Sub Lot	Random Station	Random Offset	Density Count 1	Moisture Count 1	Wet Density 1	% Max Density 1	Density Count 2	Moisture Count 2	Wet Density 2	% Max Density 2	Density Count 3	Moisture Count 3	Wet Density 3
CTH D TL	1	2+07	3.0			156.5	100.0			156.5	100.0			
CTH D TL	2	6+53	8.0			147.3	94.1			147.3	94.1			
CTH J TL	1	1+75	5.0			149.3	95.4			149.3	95.4			
CTH J TL	2	4+85	8.0			146.5	93.6			146.5	93.6			
River TL	1	3+45	4.0			149.5	95.5			149.5	95.5			
River TL	2	1+55	7.0			144.4	92.3			144.4	92.3			

This worksheet may not be modified.

Data Entry: Volumetrics

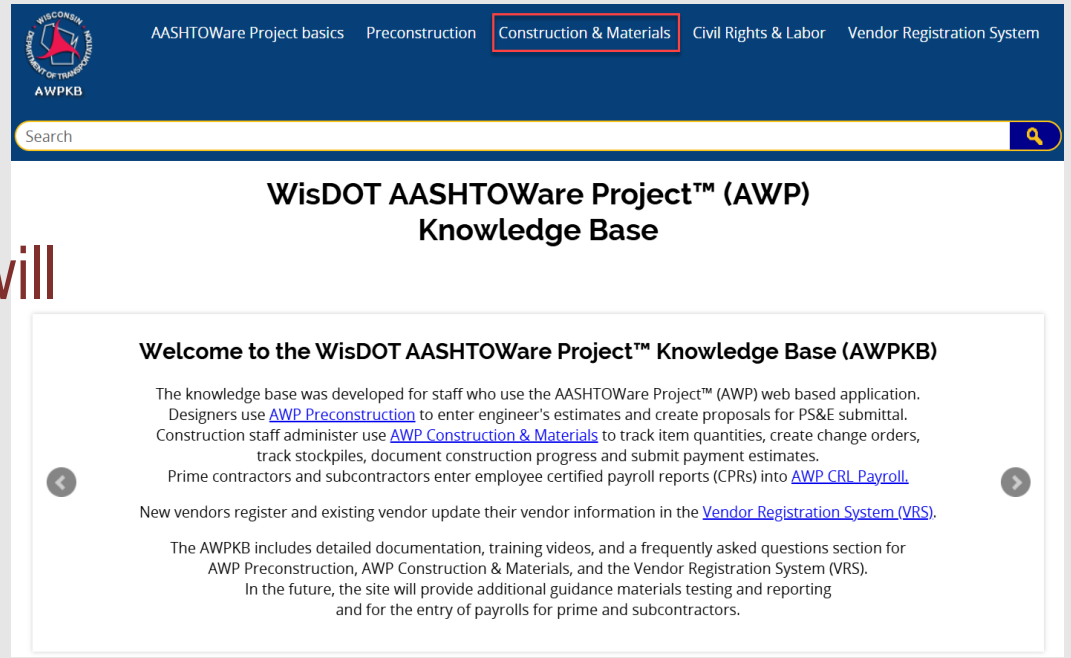
- Gmb
- Gmm
- AC%
- Gradation



Training and Resources

- Mandatory In-person Training for pilot projects
  - First week of February before projects kick off
  - Training for Spec interpretation and how to use AWP-Materials for each role
  - WisDOT staff, consultants and contractor who will be in three pilot projects

- Resources
  - WisDOT AWP Knowledge Base webpage



Potential Future Improvements

- Communication
  - AWP-Mailbox for Questions
  - System notifications (alerting roles when documents are ready for action)
- Streamlining the Process
  - Automate MD data entry
  - Automate materials testing data entry so project staff can enter the data in one location (either AWP or spreadsheet instead of both)
  - Auto-finalizing process
  - Adopt AWP Mobile Tester™ to allow capturing samples and test results on mobile devices in the field

Thank You!

Questions?