



# AASHTOWare Project

MAA CONFERENCE FEBRUARY 14, 2024

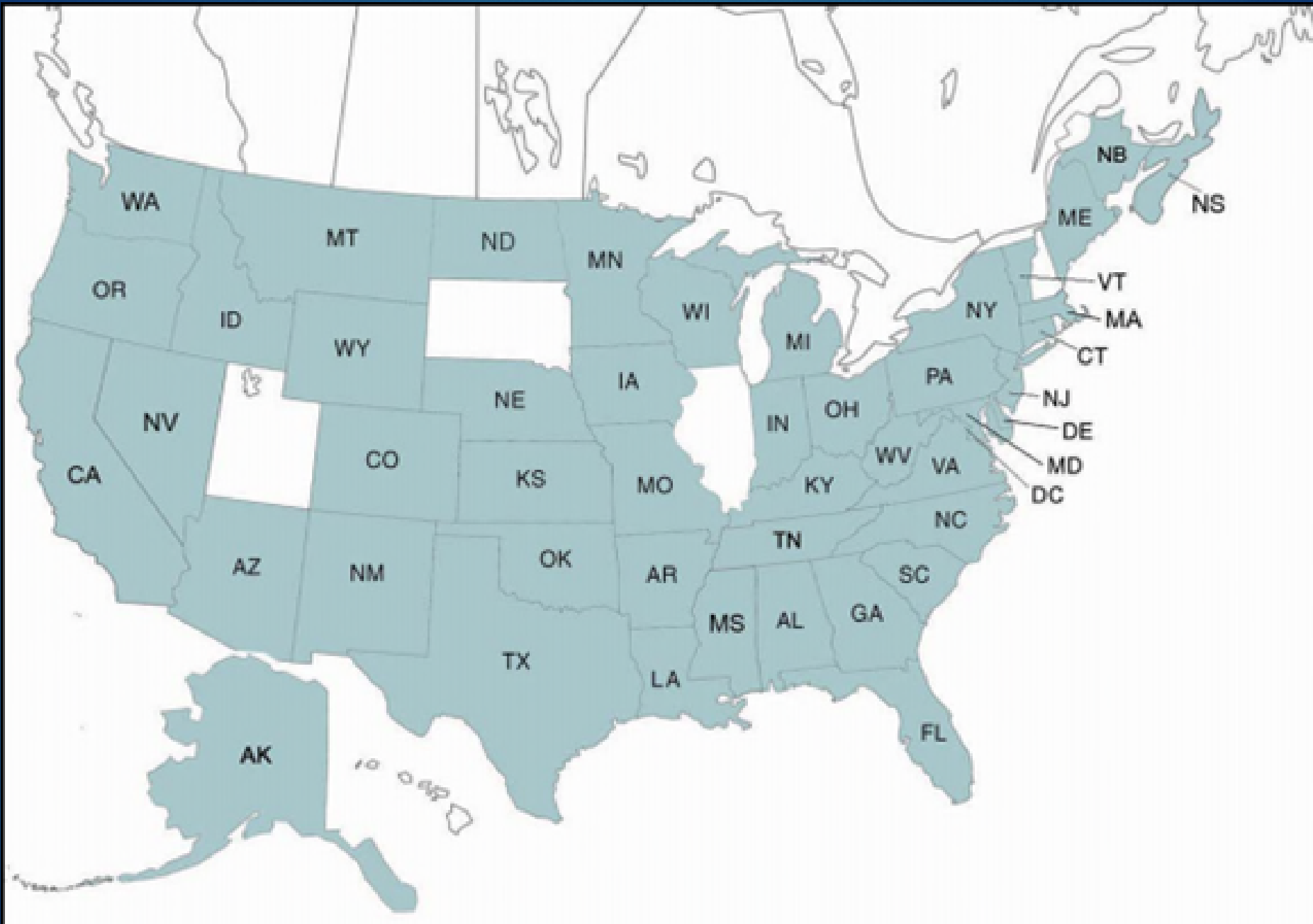


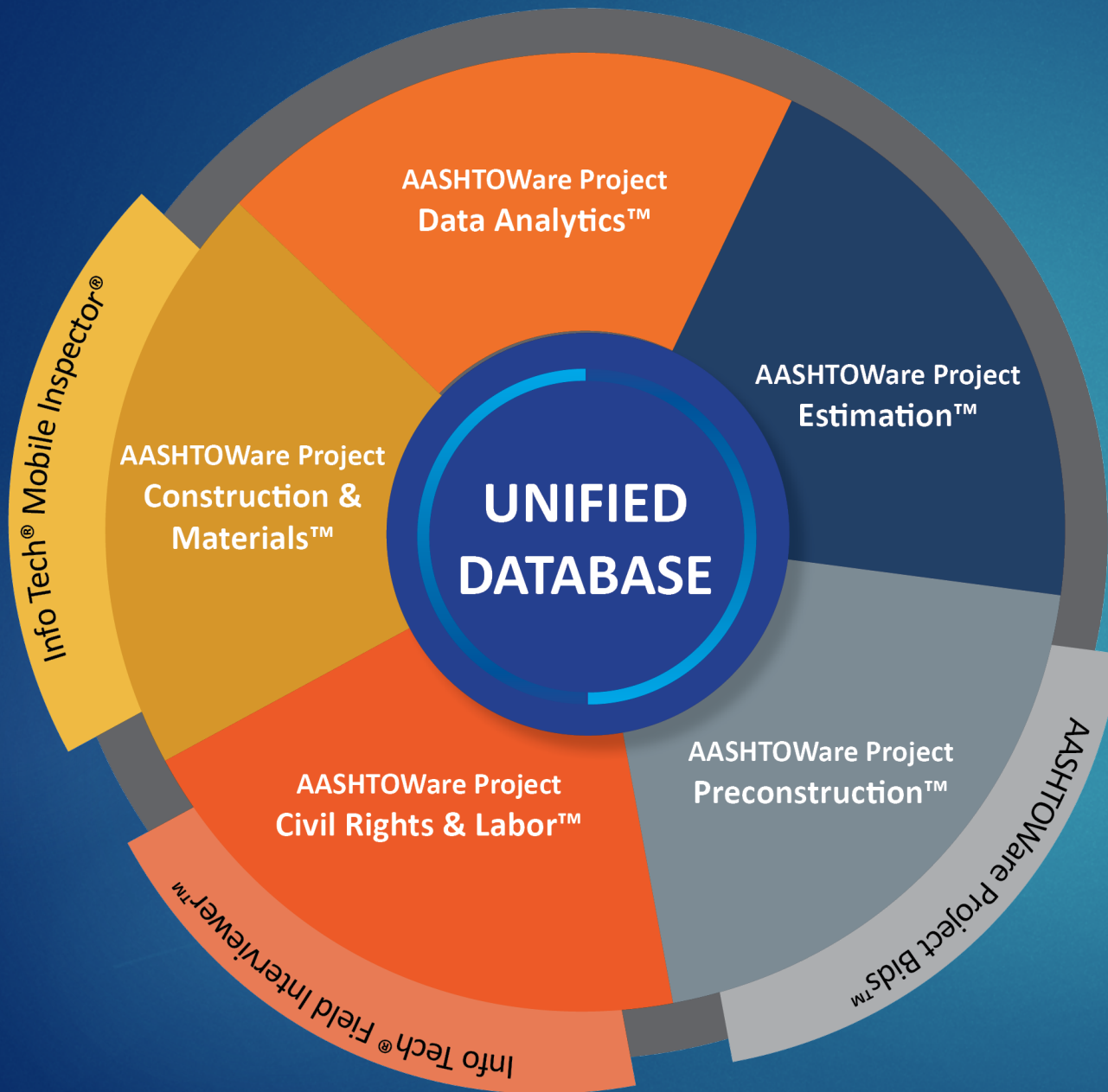
# What is AASHTOWare Project?

- ▶ Powerful enterprise-wide software suite
- ▶ Manages entire contract and construction lifecycle
- ▶ Designed by transportation professionals for transportation professionals
- ▶ Web-based software with external access options
- ▶ Mobile Apps
- ▶ 30+ years in production









- ▶ Data stored in single location
- ▶ Single standard security modal
- ▶ Captures information at the source
- ▶ Easy reporting of information from the various modules



# Construction Implementation Timeline



MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
CONSTRUCTION MANAGEMENT

COS:DCB

1 of 2

APPR:JYG:LFS:07-15-21

**a. Description.** This work consists of complying with the Department's construction management processes. The Department will manage this contract using the AASHTOWare Project Construction Materials (APCM) software. Ensure all change orders are approved using APCM. No paper documents, faxes, or other methods/media are permitted for change order approvals except as allowed by this special provision or specifically approved by the Engineer.

**b. Terminology.** Replace the following terms in all of the contract:

- Inspector's Daily Report (IDR) replaced with Daily Work Report (DWR)
- Contract Modification replaced with Change Order
- Construction Pay Estimate Report replaced with Pay Estimate for Contractor
- Contractor's Performance Evaluation replaced with Contractor Evaluation
- Site Times replaced with Contract Times

The new terms have the same definition as the term being replaced.

**c. Contractor Access to APCM.** APCM access is available at no cost to all contractors associated with the project. APCM user accounts and access is granted using the State of Michigan Identity, Credential and Access Management solution, MILogin. MILogin is a web based access portal at the following website:

<https://milogintp.michigan.gov>

Use MILogin to submit all APCM access requests.

**d. Roles and Contract Authority.** Roles restrict what data each user can view and the actions they can perform in the system. Roles will be assigned at user creation through the MILogin access request process. Read only and change order approver roles are available to the Contractor. The change order approval role requires written authorization from an authorized officer of the company.

Contract authority grants the user the ability to use one of the user's roles on a specific contract. Contract authority will be granted by the Engineer at the request of the Contractor. Provide the Engineer with a list of users and the user role for this contract at the time of the preconstruction meeting.

Notify the Engineer within 24 hours of any user access changes for this contract.

**e. Training.** Additional documentation and training for APCM processes, details of scheduled classes and methods for requesting training are available by contacting the MDOT AASHTOWare Help Desk at 1-844-4MI-MDOT (1-844-464-6368) between the hours of 8:00 a.m.

and 4:00 p.m., Monday through Friday.

**f. Technical Issue Resolution.** Upon discovery of an APCM access issue the Contractor must immediately notify the Engineer and submit a notice to the e-mail resource at:

[MDOT-ConstructionSoftware@michigan.gov](mailto:MDOT-ConstructionSoftware@michigan.gov).

**g. Change Order Approvals.** Ensure electronic review/approval of change orders are accomplished through APCM approval decisions and automated e-mail notifications. An approval decision is the system recorded decision entered by the user. When a change order is ready for approval, the user with authority to approve is notified by e-mail. Submit the approval decision by accessing APCM, reviewing the change order, and recording the approval decision within the system.

**h. Data/File Retention.** The electronic data and files stored within APCM are part of the official project documentation and will be retained per the current documentation retention schedule.

**i. Measurement and Payment.** The work included in this special provision will not be paid for separately and is considered to be included in other pay items of work in the contract.



# APCM User Access Request Form



## MDOT AASHTOWare Project Construction & Materials User Account Request Form

Please complete this form to request a user account and access to MDOT's AASHTOWare Project Construction & Materials application. This form should be completed by the user requesting access.

\* Required

### User Information Section

This section will help us determine your required level of access and will give us the information we need to set up your user account. Please provide the following information:

1. First Name: \*

2. Middle Initial:



# Training



**Classroom**



**Webinar**



**Recorded  
Video**



**AP Wiki**



# Training Schedule

- ▶ Trainings will be scheduled regularly (like Projectwise training)
- ▶ Self-service sign up and management of bookings with Microsoft Bookings page

**MDOT**

## MDOT - AASHTOWare Project Construction & Materials Trainings

SELECT A SERVICE

<p>APCM for Engineers &amp; Reviewers <input type="radio"/></p> <p>• This training offers an overview of the soft... Read more</p> <p>Free • 1 hour 30 minutes 🌐</p>	<p>Office Tech Round Table <input type="radio"/></p> <p>• This session is provided as an open questi... Read more</p> <p>Free • 2 hours 🌐</p>
<p>APCM For Office Tech's <input type="radio"/></p> <p>• This training offers in depth discussion of ... Read more</p> <p>Free • 8 hours 🌐</p>	<p>APCM for Inspectors <input type="radio"/></p> <p>• This training offers an overview of the soft... Read more</p> <p>Free • 2 hours 30 minutes 🌐</p>
<p>APCM for Contractors <input checked="" type="radio"/></p> <p>• This training offers an overview of the soft... Read more</p> <p>Free • 2 hours 🌐</p>	



# AASHTOWare Wiki

The top screenshot displays a video player for 'APCM Change Order Approval' with a 'Watch later' and 'Share' button. The bottom screenshot shows the 'AASHTOWare Project Construction & Materials Software Manual' page with a navigation menu.

**Navigation Menu:**

- DAILY WORK REPORTS
- DAILY DIARIES
- CHANGE ORDERS
- PAYMENT ESTIMATES
- RUNNING REPORTS
- GLOBAL ACTIONS

**Page Content:**

**Introduction**

Welcome to the MDOT AASHTOWare Project Construction & Materials Software Manual!

AASHTOWare Project Construction & Materials is a fast, easy-to-use, web-based system for documenting construction progress, initiating contractor payment, and communicating with your agency's central office administration applications. Construction & Materials



<https://mdotwiki.state.mi.us/aashtoware/>



# What's the future?





# Aggregate Project Mission

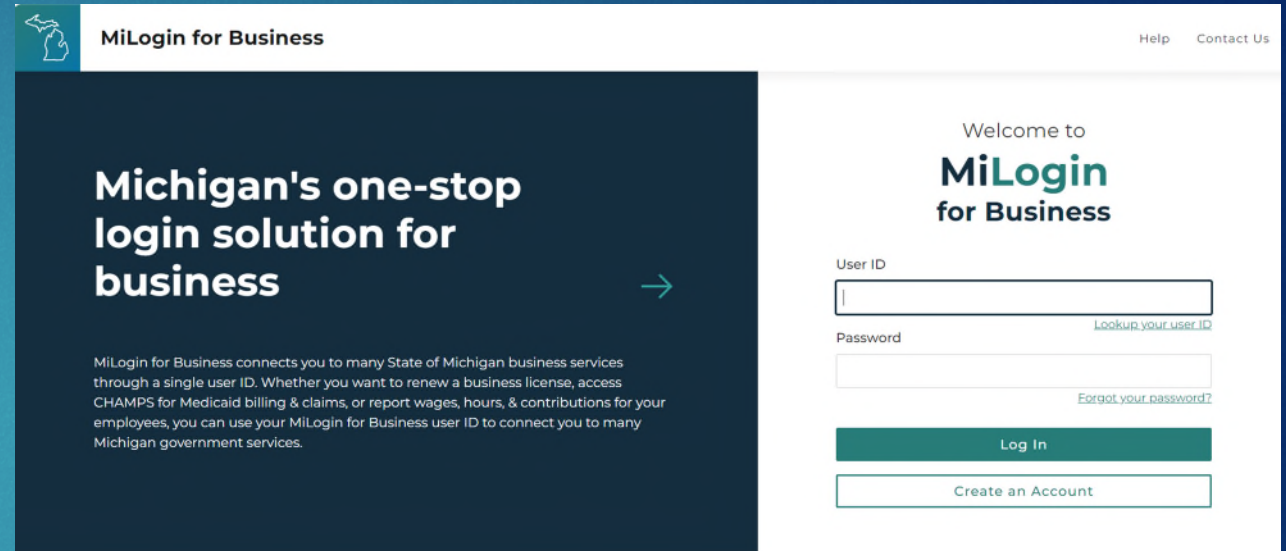


“Digitize the aggregate sampling and testing workflows to improve aggregate tracking, analysis, and reporting to reduce audit risk.”



# What to look forward to...

- ▶ Access Via MiLogin
- ▶ Live Data
  - ▶ “Real Time” Data
  - ▶ Direct Data Entry
- ▶ Fewer PDFs and signatures
  - ▶ Sample ID forms
  - ▶ Mix Designs
  - ▶ Weekly shipping reports



The screenshot displays the MiLogin for Business website. The header includes the Michigan state logo and the text "MiLogin for Business", with "Help" and "Contact Us" links on the right. The main content area is split into two columns. The left column has a dark background with the heading "Michigan's one-stop login solution for business" and a right-pointing arrow. Below this is a paragraph explaining that MiLogin for Business connects users to various state services through a single user ID. The right column has a white background with the heading "Welcome to MiLogin for Business". It features a login form with fields for "User ID" and "Password", each with a "Lookup your user ID" or "Forgot your password?" link. Below the form are "Log In" and "Create an Account" buttons.



# Aggregate Source Inventory (ASI)

- ▶ Data migrated into AASHTOWare Project
- ▶ Naming convention change
  - ▶ Added deposit type designation to ASI code
  - ▶ Retained historical ASI code for cross reference
- ▶ Foundational step for other system functions
- ▶ Improved Physical Property Test tracking

**Michigan Department of Transportation  
Aggregate Source Inventory**

\*this listing includes sources identified as active by regions  
with information on file at MDOT Aggregate Quality  
-addresses may be approximate-

9/12/2023

ASI	County	Region	Historical ASI	Quarry/Source Name	Producer	Source Address
01-0005SG	Alcona	North	01-005	Laidlaw(Wallace)	R. E. Glancy, Inc.	1048 M-65,Barton City,MI,48705
02-0060CA	Alger	Superior	02-060	Lindberg	A. Lindberg and Sons, Inc.	5741 Percy Road(Co Road653),Shingleton,MI,49884
02-0069SG	Alger	Superior	02-069	Turri	A. Lindberg and Sons, Inc.	3202 Ladoga Road(Co Road281),Trenary,MI,49891
02-0086SG	Alger	Superior	02-086	Carr	Bacco Construction Compa	E7779 M-28,Munising,MI,49862
02-0087SG	Alger	Superior	02-087	Forest Land Group	Bacco Construction Compa	Pit Access Road,Christmas,MI,49862
02-0088CA	Alger	Superior	02-088	Bed Rock	Mottes Sand & Gravel	6237 Percy Road (Co Road 653),Shingleton,MI,49884
02-0089SG	Alger	Superior	02-089	Cunningham	Mottes Sand & Gravel	County Road 705,Burt Township,MI,49884
02-0090SG	Alger	Superior	02-090	Peterson Pond		5370 Rielly Lake Road,Rapid River,MI,49878
02-0091SG	Alger	Superior	02-091	Deerton		1387 M-28,Onota Township,MI,49822
02-0092SG	Alger	Superior	02-092	Deerton		1387 M-28,Onota Township,MI,49822



# Person Qualifications

- ▶ Replacement of Construction Quality Partnership (CQP) program with Red Vector
- ▶ Tracking MCAT 1 & 2, Density, IATs, and more

## Person Qualifications Summary

Person: Save ?

General

Tester

Tester Labs

Sampler

Sampler Labs

Sample Reviewer

Calibrator

Calibrator Labs

Welder

Stormwater Inspector

Search:  System Default Showing 9 of 9 Qualification Type: No Filter

Select Testing Qualifications...

0 marked for deletion | 0 changed

Qualification ID	Qualification Type	Qualification Description	Status	Active
IAT AGG(Sample) 2021	IAT - Independent Assurance Tests	IAT Aggregate (Sample) Test Cert 2021	ACTIVE - Active	Yes
RAD	DENSITY - Density	Radiation Safety Certification	ACTIVE - Active	No
HAZMAT	DENSITY - Density	Hazardous Materials Certification	ACTIVE - Active	No
MCAT1	AGG - Aggregate	MI Certified Agg Tech Lvl 1	ACTIVE - Active	No
ADS	DENSITY - Density	Area Density Specialist Training		



# Weekly Shipping Reports

- ▶ Known in the system as Daily Source Reports (DSRs)
  - ▶ Still weekly
  - ▶ Required for **ALL** suppliers shipping for MDOT contracts
  - ▶ Multiple materials can be listed on the same DSR
- ▶ Direct System access to suppliers to enter data into the system



# Weekly Shipping Reports Cont.

Home Previous My Pages D3 DEVELOPMENT ENVIRONMENT

Daily Source Report

DSR Material There are unsaved changes.

DSR Material: 960 - 960\_16-0015SG

Source: DK-0011 - Bay Aggregates Facility: - Date: 04/08/2022

Production Details

Destination Sources/Facilities

Destination Contracts

Components

Facilities:

Select Facilities...

No rows found matching criteria.

Sources:

Select Sources...

Quantity	Source
20,000.000	Consumers Concrete - Consumers Concrete

Example



# Job Mix Formulas (Mix Designs)

- ▶ Creating a statewide database of approved mix designs
- ▶ Incorporating MDOT Review and Approval Process

Clear Form

Michigan Department of Transportation  
1976 (06/17)

**JOB MIX FORMULA (JMF)  
CONCRETE FIELD COMMUNICATION**

File 206

This form applies only to the project listed below and is not transferable to other projects  
**DISTRIBUTION: ORIGINAL** – Project Engineer **COPIES** – Contractor, Lansing CFS, Region, Inspector

CONTROL SECTION	JOB NUMBER	PROJECT LOCATION	PROJECT ENGINEER	
CONCRETE SUPPLIER		PLANT LOCATION		PLANT NUMBER
GRADE OF CONCRETE	PSI REQUIREMENT	MIX DESIGN NUMBER	INTENDED USE (S)	CONTRACTOR QC PLAN SUBMITTED? (MDOT use only) <input type="checkbox"/> Y <input type="checkbox"/> N
PRIME / SUBCONTRACTOR(S)				
STANDARD SPEC DATE		QC/QA SPECIAL PROVISION DATE	JMF EFFECTIVE DATE	AGG. CORRECTION

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE	INTERMEDIATE AGGREGATE	FINE AGGREGATE
Aggregate Type	Aggregate Type	Aggregate Type
Source Name	Source Name	Source Name
MDOT Source No.	MDOT Source No.	MDOT Source No.
MDOT Series Class	MDOT Series Class	MDOT Series Class
Specific Gravity (Bulk Dry)*	Specific Gravity (Bulk Dry)*	Specific Gravity (Bulk Dry)*
Specific Gravity (Bulk SSD) optional	Specific Gravity (Bulk SSD) optional	Specific Gravity (Bulk SSD) optional
Absorption	Absorption	Absorption
Unit Weight (Dry Rodded) DR or	Unit Weight (Dry Rodded) DR or	Unit Weight (Dry Rodded) DR or
Unit Weight (Dry Loose) DL	Unit Weight (Dry Loose) DL	Unit Weight (Dry Loose) DL
Percent Crushed	Percent Crushed	Percent Crushed
MDOT Freeze-Thaw (F-T) Dilation	MDOT Freeze-Thaw (F-T) Dilation	MDOT Freeze-Thaw (F-T) Dilation
Specific Gravity (Bulk Dry) of F-T	Specific Gravity (Bulk Dry) of F-T	Specific Gravity (Bulk Dry) of F-T
Sample*	Sample*	Sample*
Date of MDOT Freeze-Thaw Report	Date of MDOT Freeze-Thaw Report	Date of MDOT Freeze-Thaw Report

\* If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

**CEMENTITIOUS**
**ADMIXTURES**



# Job Mix Formulas (Mix Designs) cont.

Home Previous My Pages D3 DEVELOPMENT ENVIRONMENT Actions Help Log off

Overview

### Mix Design Summary

▼ Mix Design: P1-SM Save ?

<b>General</b>	<b>Mix Design ID *</b> P1-SM	<b>Remarks</b> 0
<b>Contracts</b>	<b>Mix Design Type</b> 1 - Concrete	<b>Mixture Submitted Date</b>
<b>Specifications</b>	<b>Description</b> MDOT 3500 PSI AE W/MR - 6" MAX	<b>Mixture Submitted By</b>
	<b>Material *</b> 2360 Clay and Sand Lime Brick and block	<b>MDOT Approval Date</b>
	<b>Source *</b> Pit #47-056 Fyke Washed Sand & Gravel - Pinckney Road	<b>MDOT Approved By</b>
	<b>Approval Status</b> Draft	<b>Effective Date</b> 02/07/2024
	<b>Season of Placement</b>	<b>Expiration Date</b> mm/dd/yyyy
		<b>Status</b> ACTIVE - Active
		<b>Active</b> Yes

▼ Remarks

Type *	Remark *
Begin typing to search or press Enter	



# Job Mix Formulas (Mix Designs) cont.

▼ Coarse Aggregate

New 1 added | 0 marked for deletion | 0 changed

Material	ASI Number	Pct of MD By Wt	SG BD*	SG (Bulk SSD) Opt	Absorption	Unit Wt (DR)	Unit Wt (DL)	Pct Crshd	MDOT FT Dilution	SG (BD) FT Smp1*	Dt MDOT FT Rpt	
<input type="text" value="Begin typing to search o"/>	<input type="text" value="Begin typing to search o"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="mm/dd/yyyy"/>	<input type="text"/>

\*If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

▼ Intermediate Aggregate

New 1 added | 0 marked for deletion | 0 changed

Material	ASI Number	Pct of MD By Wt	SG BD*	SG (Bulk SSD) Opt	Absorption	Unit Wt (DR)	Unit Wt (DL)	Pct Crshd	MDOT FT Dilution	SG (BD) FT Smp1*	Dt MDOT FT Rpt	
<input type="text" value="Begin typing to search o"/>	<input type="text" value="Begin typing to search o"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="mm/dd/yyyy"/>	<input type="text"/>

\*If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

▼ Fine Aggregate

New 1 added | 0 marked for deletion | 0 changed

Material	ASI Number	Pct of MD By Wt	SG BD*	SG (Bulk SSD) Opt	Absorption	Fineness Modulus (FM)	
<input type="text" value="Begin typing to search o"/>	<input type="text" value="Begin typing to search o"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

\*If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

▼ Cementitious

New 1 added | 0 marked for deletion | 0 changed

Material	Source	Pct of MD By Wt	Cmnt Type	Cmnt SG	Fly Ash Source	Fly Ash Class	Fly Ash SG	Slag Cmnt Source	Slag Cmnt SG	Other	
<input type="text" value="Begin typing to search o"/>	<input type="text" value="Begin typing to search o"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Begin typing to search o"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Begin typing to search o"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Example



# Material Source Lists

- ▶ Direct entry and submission within the system
- ▶ Reduction of processing time

## Contract Materials and Acceptance Actions Summary

Contract : 003870\_DB - Construct new interchange - Dan Burns

Materials

Acceptance Actions

Mix Designs

Contractor Material Sources

Contractor Material Log

e-Ticket Totals

Contractor Materials

Contractor Material Sources

Type search criteria or press Enter **Advanced** Showing 10 of 49

Material Code Contract Item Line Number Source ID Facility ID Submitted Approved

No Filter No Filter

New Add new from Contract Materials...

0 added | 0 marked for deletion | 0 changed

Item	Material	Specification Reference	Type/Size/Class	Source	Facility	Approximate Quantity	Submitted	Approved	Date of Submission	Comments
120 3020001 Aggregate Base	700.01 #57 Limestone Aggregate	700	5	MMS Mix Matching Supply	Begin typing to search c	100.00000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10/27/2023	Example
120 3020001 Aggregate Base	700.03 #67 Limestone Aggregate			Begin typing to search c	Begin typing to search c		<input type="checkbox"/>	<input type="checkbox"/>		



# Improved Sample Tracking

“Bag it, tag it, scan it, track it, test it, report it”

Michigan Department  
Of Transportation  
1923 (05/13)

**SAMPLE IDENTIFICATION**  
Send sample to MDT Construction Field Services  
8885 Ricks Rd., Lansing, Michigan 48909  
SEE INSTRUCTIONS BELOW

CONTROL SECTION	
JOB NUMBER/PO NUMBER	DATE SAMPLED
LAB NUMBER	DATE RECEIVED

LAB:  Aggregate  AWI  Concrete  HMA  Metals  Soils/ Geotextiles

NAME OF MATERIAL

SOURCE / SUPPLIER / PIT NAME ADDRESS / PIT NUMBER

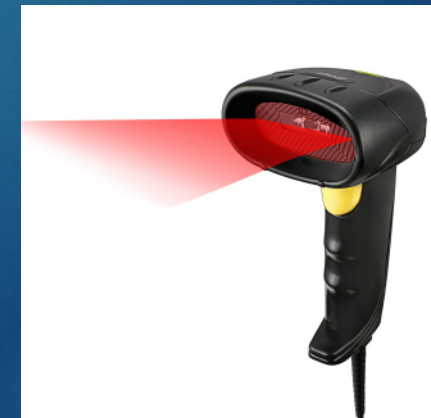
MANUFACTURER / PRODUCER ADDRESS

SAMPLED FROM

QUANTITY OF MATERIAL REPRESENTED BY SAMPLE

CONSIGNEE TO ADDRESS

SAMPLED BY PHONE/EMAIL TITLE





# Improved Sample Tracking

“Bag it, tag it, scan it, track it, test it, report it”

Overview Find Sample Maintain Test Queue Receive at Destination Lab Receive at Lab Unit Review Samples Review Tests

## Sample Record Summary

Sample Record: 1-11053 Save ?

General Sample Record: Test(s) may not be assigned to Sample Records without a Destination Lab association on the Associations tab.

Sources

Associations

Contract

Tests

**Sample ID \***  
1-11053

**Material Code - Name \***  
Q 6060\_Test  
Coarse Aggregate 6AA\_Test

**Source ID - Name \***  
Q 03-0110SG  
Rocky Top

**English Unit**

**Sample Date \***  
02/04/2024

**Sample Type \***  
SAMPLE - Real Physical Sample

**Acceptance Method \***  
Test - Test

**Remarks**  
0

**File**

**Form**

**Percent Recycled Asphalt Pavement (RAP)**

**Sample Status**  
Pending

**Created By**  
BurnsD

**Created Date**  
02/12/2024 5:36:59 PM

**Last Updated By**  
BurnsD





# Thank You!

[MDOT-CONSTRUCTIONSOFTWARE@MICHIGAN.GOV](mailto:MDOT-CONSTRUCTIONSOFTWARE@MICHIGAN.GOV)