

# Minnesota M-TRAC Report 2024

*We have a team of staff, each with specific expertise, to better support students and instructors and to move forward with program improvements.*



**John Micheau**  
Supervisor

**Rachel Brown**  
Education & Evaluation

**DJ (Don) Horman**  
Engineering & Instruction

**Khoua Lee**  
Marketing & Communication



**Suzanne Johnsrud**  
Customized Training and  
Outreach Manager

**Iris Hiemenz**  
Continuing Education &  
Customized Training

# Training Center Update John Micheau

## New MnDOT Technical Certification Facility

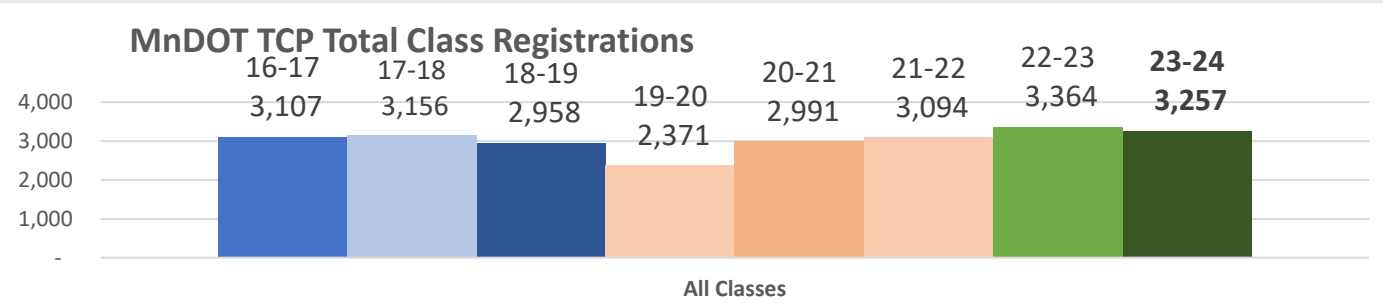
- A wing added to the west end of the current materials lab
- Used for our normal certification season
- Add year-round just-in-time training
- 2 Labs
- 2 Classrooms that can be made into 1 larger one
- Offices for TCP staff and space for instructors



*We hope to have even more detail on this by next year, including construction photos.*

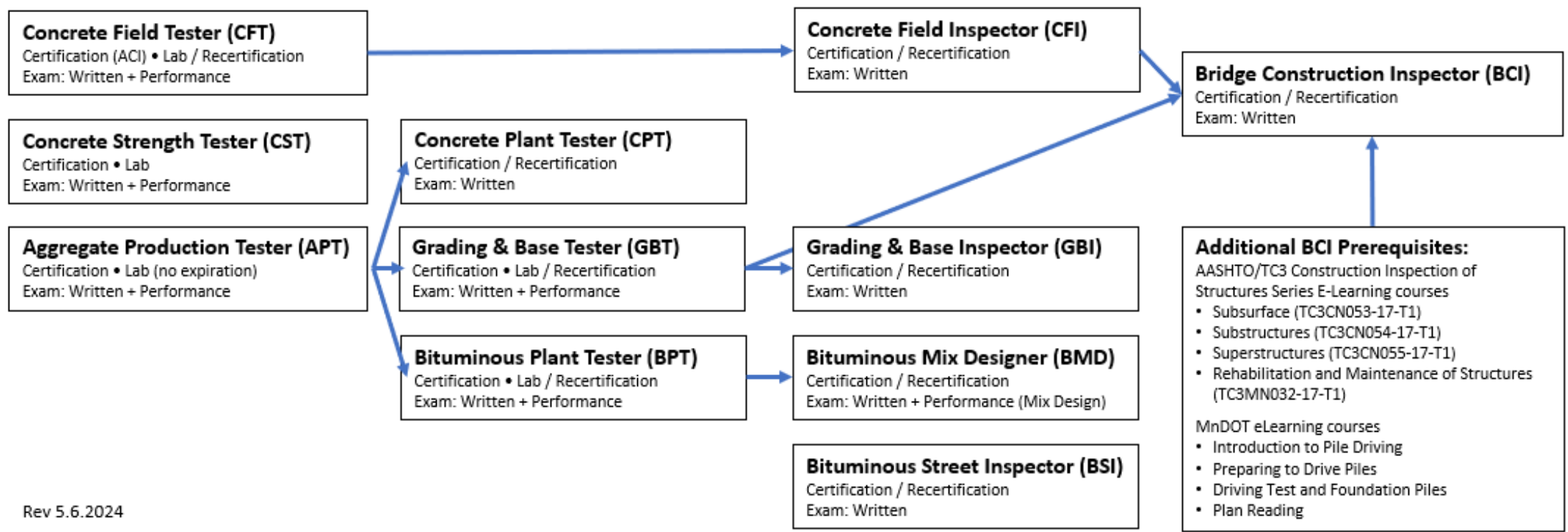


# Program Overview John Micheau



*Class enrollment #s have been steady and slightly higher than they were in the pandemic years for our 11 certifications in Aggregates, Concrete, Bituminous, Grading and Base, and Bridge Construction.*

## MnDOT Materials Testing Certification Paths: All Certifications





## Technical Certification Program (TCP)

May 2024

### Technical Certification Program Newsletter



Welcome to our monthly newsletter! The Technical Certification Program's newsletter will include course updates, highlights, upcoming courses, and more! If there's anything you'd like to see in future newsletters, feel free to email us at [tech-cert.dot@state.mn.us](mailto:tech-cert.dot@state.mn.us).

#### Deadlines

Bituminous Plant Tester Certification (BPTC) Performance Exams - May 15

The certification will not be awarded until you pass the performance exam. If you have not done so already, contact your District lab to schedule your BPTC Performance Exam. Students with special situations may arrange for an extension to that deadline, up to June 15, 2024, but only if arranged for by May 15, 2024.

[About BPTC Performance Review scheduling](#)

Request a Retest if you need to and are eligible

If you have a score that is 60-69%, you may request to take one retest. To get access to a retest exam, email us (link to [tech-cert.dot@state.mn.us](mailto:tech-cert.dot@state.mn.us) with email subject line - retest request) with your name, Tech ID, and the name of the certification.

You must complete a re-test exam in the same training season as the original class and by May 31. **Need to have re-tests complete by May 31st!**

[More information](#)

Recently Expired Certification Exam (RECE)

### Purpose and Goals:

- Inform our readers on updates, upcoming deadlines, program details, and recertifications
- Email Newsletter sent Monthly
- Make sure emails do not bounce so everyone gets updates.
- 8,500 clean email contacts as of June 2024

### What's in the Newsletter?

- Reminders
- Instructor Highlights
- Deadlines
- Relevant information in Specialty

*An email newsletter keeps students and workers informed with program updates, fosters community through highlights and interactive content, supporting ongoing education and skill enhancement, and promotes the program by showcasing benefits and networking opportunities.*

### Overall Analytics

(overall email marketing for industry)

**Open Rate Target: 35%** (the higher, the better)

**Click Rate Target: 2%** (the higher, the better)

**Bounce Rate Target: 10%** (the lower the better)

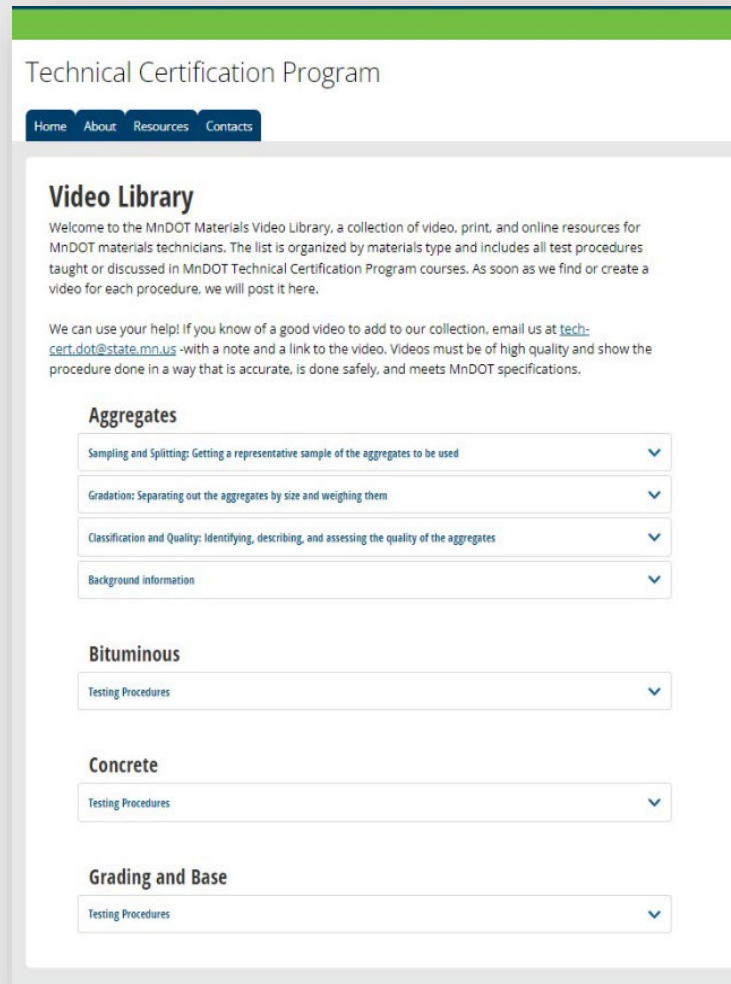
Month	Open Rate	Click Rate	Bounce Rate
February	46%	5%	16%
March	49%	9%	13%
April	45%	4%	4%
May	42%	2%	4%
June	40%	4%	4%



# Video Library (Khoua & DJ)

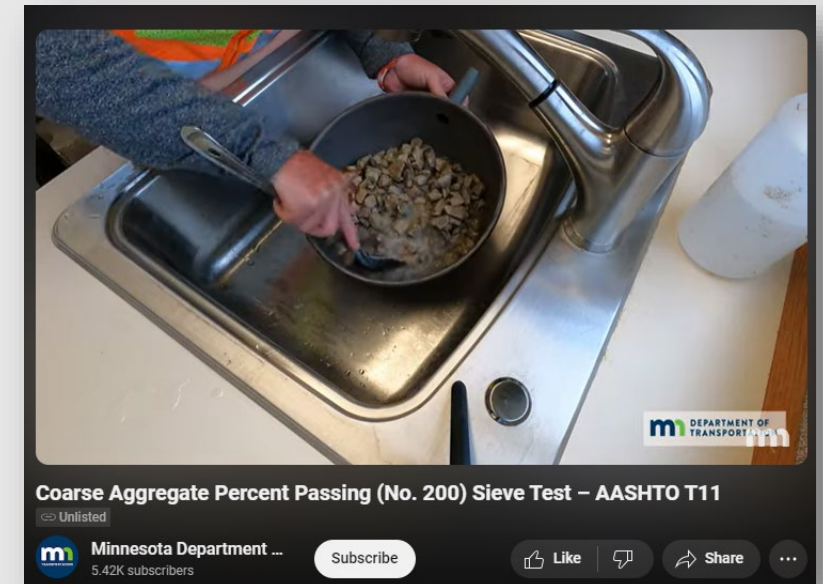
*Videos provide a dynamic and engaging way to present complex processes, making it easier for students. We are finding and making videos to add to the library.*

<https://www.dot.state.mn.us/technicalcertification/videolibrary.html>



The list is organized by materials type and includes test procedures taught or discussed in MnDOT Technical Certification Program courses.

- **Aggregate**
- **Bituminous**
- **Concrete**
- **Grading & Base**



- Self-paced learning
- Visual demonstrations
- Remote access – just in time
- Accessibility

# Lab Sessions DJ Horman

## Lab Visits

- 64 classes held last season with a lab
  - APTC – 9 different locations
  - GBTC – 5 different locations
  - BPTC – 4 different locations
  - CFTC – 4 different locations

*We have a team working to introduce new density training in Grading and Base Certification courses, using training devices (no radiation) in the lab session.*

## Suggestions?

## Licensed/Non-Licensed Nuclear Gauges



## Lightweight Deflectometer



# TCP's Role Rachel Brown

*We see our role to be a connector among various stakeholders, all working to ensure that Minnesota technicians are certified – and well qualified – to test and inspect roadway and bridge materials.*

## Technicians

- Testers
- Inspectors
- Mix Designers

~ 3,000 annual  
~ 5,000 certified

## Material Offices

- Concrete
- Bituminous
- Grading & Base
- Bridge Construction

*Our program structure includes a variety of different partners and collaborators, making consistency across the program a challenge.*



## Employers

- MnDOT Districts
- Contractors
- Testing Firms
- Counties
- Cities

## Partners

- Colleges
- Industry Associations
- Instructors
- MnDOT Districts
  - Lab staff
  - IAs
  - TDS
- FHWA

# Aggregates Intro Course Redesign Rachel Brown

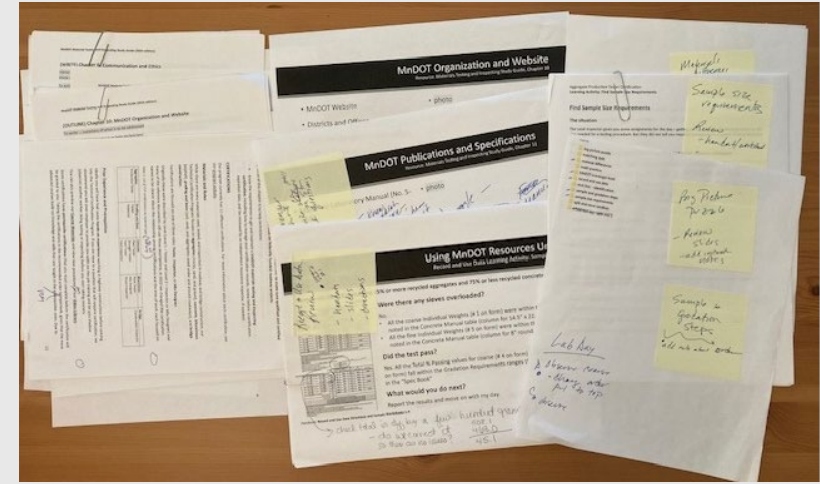
*We are deep in a full revision of our Aggregate Production Tester course, using it as an opportunity to showcase teaching methods and curriculum design features that could be used in all our courses.*

## Why?

- Course without a home
- Content of course used by all other materials
- Added to but not designed for over 30 year
- Class-Lab-Class structure means 2 days of lecture
- Students coming with little or no experience

## Plan and Features

- Input from all materials offices
- Refocusing as foundational introduction to field, work of certification, the “why”
- Study Guide with short, focused chapters explaining what, why, how things are done
- Written in “plain language” with references to specs
- Focused units with clear objectives
- Hands on learning opportunities for every unit





*This is an example of an in-class learning activity, to be done after lectures on sampling, reduction, and gradation. If there is time and interest, we have cards for people to try it out @M-TRAC.*

# Gradations Unit

Learning Activity: Sampling and Gradation Steps - Task

## The scenario:

You are to get a sample, reduce it, and run coarse and fine sieve analyses on it to get the gradation

## The details:

- Get the sample of base material from the roadway
- Use equipment in the field lab trailer
- Use splitters and mechanical shakers
- Document the results

## The task:

Put the key steps in the correct order.






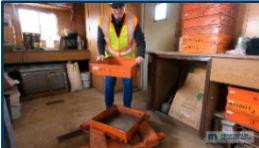



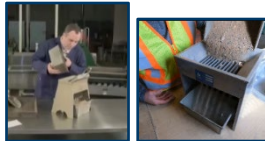








Handout: bag of **Sampling and Gradation Cards**



*The answers (to be used if we do the activity at the meeting).*

# Gradations Unit

Learning Activity: Sampling and Gradation Steps – Correct Order

<p>Before you begin, make sure all sieves, pans, counters, and scales are clean and in good condition.</p> 	<p>Get a sample from the roadway.</p> 	<p>Make sure the sample is dry enough to do the gradation. If not, air or oven dry.</p> 	<p>Run the coarse sample through a riffle splitter to get the correct sample size.</p> 	<p>Get the weight of the full coarse and fine sample and record it.</p> 	<p>Set the coarse sieves on the shaker with the sieves in the correct order and the pan on the bottom.</p> 
<p>Pour the sample into the top sieve and run the shaker.</p> 	<p>Weigh the sample retained (left) on each coarse sieve and in the bottom pan. Record the weights as you get them.</p> 	<p>Get a sample of the fine material from the bottom pan of the shaker.</p> 	<p>Use a splitter to reduce the fine material to the correct sample size.</p> 	<p>Dry the fine sample. After it has cooled, weigh it, and record the weight before washing.</p> 	<p>Wash the fine sample.</p> 
<p>Dry the fine sample. After it has cooled, weigh it, and record the weight after washing.</p> 	<p>Set up the nest of fine sieves, in the correct order, and put the sample in.</p> 	<p>Run the fine shaker.</p> 	<p>Weigh the sample retained (left) on each fine sieve and in the bottom pan. Record the weights as you get them.</p> 	<p>Complete the gradation form, including calculations.</p> 	<p>Clean all sieves, pans, counters, and scales so they are ready to be used for the next gradation.</p> 



TECHNICAL CERTIFICATION PROGRAM

**mn** DEPARTMENT OF  
TRANSPORTATION

# Thank You!



## ANY FOLLOWUP?

Email: [tech-cert.dot@state.mn.us](mailto:tech-cert.dot@state.mn.us)

Website: <http://www.dot.state.mn.us/technical-certification/>