



AGGREGATE & READY MIX
ASSOCIATION OF MINNESOTA



Lake Superior College



2008 - 2009

**Mn/DOT Certification Courses
and Recertification Courses**

**Presented by ARM of Minnesota in
Cooperation with Lake Superior College**

Aggregate Production

Concrete Field 1 – Mn/DOT and ACI

Concrete Field 2

Concrete Field Recertification – Mn/DOT only

Concrete Plant 1

Concrete Plant 2

Concrete Plant 1 Recertification

Concrete Plant 2 Recertification

Concrete Flatwork Finisher & Technician – ACI

Pervious Concrete Contractor Certification – NRMCA

ARM Registration Office

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Aggregate & Ready Mix Association of Minnesota (ARM)

ARM is united and committed to the aggregate & ready mix concrete industries for the purpose of promotion, education, environmental awareness and government affairs while serving as a responsible citizen to our customers, employees, and neighbors.

ARM is a statewide, non-profit association of producers and businesses who have a common interest in the production of aggregates and ready-mix concrete. Members include aggregate and concrete producers, cement and fly ash producers, admixture suppliers, mining and trucking equipment suppliers, engineering and legal firms, and various other companies related to the industry.

ARM promotes the use of the various products produced by its members and represents the industry interests with other state and national associations. ARM works vigorously to insure that its members and customers are kept current of the latest technologies and developments. To accomplish this goal, ARM is sponsoring the technical certification training in conjunction with the Minnesota Department of Transportation and Lake Superior College, Duluth, MN.

ARM Staff

Fred Corrigan – Executive Director
Dave Fennessy Promotions Director
Jill Cohen – Operations Manager
Margaret Mills – Communications & Events Director
Dan Frentress, P.E. – ACI Education Coordinator
Suzanne Johnsrud – ACI Registration Coordinator

Registration Office (888) 733-4649 or (952) 807-4454
email: registration@armofmn.com

Minnesota Department of Transportation Certification Program

Most states across the nation require some sort of certification or qualifications for construction and materials testing technicians. These programs vary somewhat from state to state, but have a common theme: they try to gauge technical expertise and ensure a minimum level of competence.

Mn/DOT has developed a number of areas of technical certification utilizing technical expertise from Mn/DOT, private industry and educational institutions and has engaged instructors with technical competence and experience to present the courses.

Since aggregate technology is common to most areas of highway construction, the Aggregate Production class has been developed as a required introductory course to the other training classes in Grading and Base, Bituminous and Concrete Plant. There is no recertification for this class. Successfully passing the class is only required once.

Further information on the classes offered in the Mn/DOT Certification Program may be obtained by contacting the Technical Certification Office at (651) 366-4201 or write to:

Mn/DOT – Construction Office
Technical Certification Section
John Ireland Blvd., MS 650
St. Paul, MN 55155-1899
<http://www.dot.state.mn.us/const/tcp/>

Aggregate Production

Aggregate and Ready Mix Association of Minnesota (ARM), in cooperation with Lake Superior College, and Minnesota Department of Transportation, is offering Aggregate Production classes on the dates and locations as shown.

The topics to be presented in this course include aggregate applications, sources, production, specifications and identification of rock types and unsound materials. The course includes a full day of laboratory work doing sampling and splitting, coarse and fine aggregate gradations, specific gravities, spall content, and percent of crushed particles.

While this is an introductory class, students are expected to have a **workable knowledge of mathematics and be able to perform math functions on hand-held calculators**. Certification will require completing the lab exercises and passing the open book examination with a score of at least 70%.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisite: None
- No recertification required
- Length: 3 days (1 College Credit) from 8:00 AM – 4:30 PM
- Professional Development Hours (PDH): 18 PDH
- Fee: \$335
- Instructors: Tom Hunt Mn/DOT (Ret.), Dan Frentress, PE, Doug Schwartz, PE

Course Dates and Locations

AG1297	Mn/DOT Maplewood Lab	Dec 2-4, 2008
AG1298	Mn/DOT Maplewood Lab	Dec 3-5, 2008
AG1299	Mn/DOT Maplewood Lab	Dec 8-10, 2008
AG1300	Mn/DOT Maplewood Lab	Dec 9-11, 2008
AG1301	Mn/DOT Bemidji	Dec 16-18, 2008
AG1302	Mn/DOT Bemidji	Dec 17-19, 2008
AG1303	Mn/DOT Maplewood Lab	Jan 6-8, 2009
AG1304	Mn/DOT Maplewood Lab	Jan 7-9, 2009
AG1305	Mn/DOT Maplewood Lab	Jan 12-14, 2009
AG1306	Mn/DOT Maplewood Lab	Jan 13-15, 2009
AG1307	Mankato Country Inn	Jan 20-22, 2009
AG1308	Mankato Country Inn	Jan 21-23, 2009
AG1309	Mn/DOT Rochester	Jan 27-29, 2009
AG1310	Mn/DOT Rochester	Jan 28-30, 2009
AG1311	Mn/DOT Baxter	Feb 24-26, 2009
AG1312	Mn/DOT Baxter	Feb 25-27, 2009
AG1313	Mn/DOT Willmar	Mar 10-12, 2009
AG1314	Mn/DOT Willmar	Mar 11-13, 2009
AG1315	Mn/DOT Duluth	Apr 21-23, 2009
AG1316	Mn/DOT Duluth	Apr 22-24, 2009

Concrete Field 1 and 2 Certification and Recertification

Concrete Field Testing Technician Level 1

This Concrete Field 1 class offers certifications for **BOTH ACI and Mn/DOT**. The certification you would like to receive will be indicated by the fee level you select on the registration form.

The course is for those who produce, test and inspect Portland cement concrete. The test procedures presented include slump, strength, air contents, unit weight and sampling. To be certified the technician must pass both the written and performance examination. Actual field tests will be performed on the second day. Field work clothes suggested.

CF1240	Mn/DOT Tng & Conf Ctr	Nov 20-21, 2008
CF1241	Mn/DOT Tng & Conf Ctr	Dec 10-11, 2008
CF1242	Ramsey County Public Works	Jan 26-27, 2009
CF1243	Mn/DOT Tng & Conf Ctr	Feb 17-18, 2009
CF1244	Mn/DOT Rochester	Mar 17-18, 2009
CF1245	Mn/DOT Bemidji	Apr 7-8, 2009
CF1246	Mn/DOT Tng & Conf Ctr	Apr 14-15, 2009

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: None
- Length: 2 days (1 College Credit) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 12 PDH
- Fee: \$330 ACI & Mn/DOT Certification
\$280 Mn/DOT Certification Only
- Instructors: Ann Johnson, PE, Dan Frentress, PE

Concrete Field 2

This class is designed for the more experienced Technician and is recommended for those who are responsible for concrete inspection of paving, curb and gutter, walks, and related structures. The course covers materials technology and construction practices based on Mn/DOT specifications and PCA publications. The student textbook will include specification updates and information from the Mn/DOT Concrete Manual. To receive Mn/DOT certification the student must earn a score of at least 70%.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Field 1
- Length: 4 days (2 College Credits) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 24 PDH
- Fee: \$415 (includes student manual)
- Instructors: Dan Frentress, PE, Paul Juckel, Mn/DOT (Ret.), and Maria Masten, PE, Mn/DOT Concrete Office

CF2088	Mn/DOT Tng & Conf Ctr	Dec 16-19, 2008
CF2089	Mn/DOT Tng & Conf Ctr	Mar 31- Apr 3, 2009
CF2090	Mn/DOT St. Cloud	Apr 14-17, 2009

Concrete Field Recertification – Mn/DOT only

This class will include updates on the technology of cementitious materials, admixtures and aggregates. Test procedures will be reviewed as well as updates of the specifications and the Mn/DOT Concrete Manual. Durability issues will be discussed with particular emphasis on finishing practices and curing. This class does not provide ACI recertification.

For ACI Concrete Field recertification, an individual must re-attend, and successfully complete, one of the Concrete Field 1 classes.

- Prerequisites: Mn/DOT Concrete Field 1 & 2 Certification
- Length: 1 day from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 6 PDH
- Fee: \$150
- Instructors: Paul Juckel, Mn/DOT (Ret.), Maria Masten, PE, MnDOT Concrete Office, Dan Frentress, PE

CFR0090	Mn/DOT Bemidji	Dec 12, 2008
CFR0091	Mn/DOT Tng & Conf Ctr	Dec 15, 2008
CFR0092	Mn/DOT Duluth	Dec 22, 2008
CFR0093	BASF Admixtures, Eagan*	Mar 24, 2009
CFR0094	Mn/DOT Rochester	Mar 25, 2009
CFR0095	Mankato Country Inn	Mar 26, 2009
CFR0096	Mn/DOT Tng & Conf Ctr	Mar 27, 2009
CFR0097	Mn/DOT Tng & Conf Ctr	Mar 30, 2009
CFR0098	Mn/DOT Detroit Lakes	Apr 6, 2009
CFR0099	Mn/DOT St. Cloud	Apr 13, 2009

ACI Concrete Flatwork Finisher Technician Program

This program is designed to provide a basis for certifying experienced concrete finishers, alleviate problems related to improper field practices, upgrade the quality of concrete construction, and prepare the industry for the possibility of mandatory certification in the future. Craftsmen who upgrade their skills and credentials through ACI certification may increase their own opportunities as well as contribute to the advancement of the industry. Before taking this course, students should have a good working knowledge of the proper use of finishing tools, placing, finishing, jointing, curing, and protection.

Those meeting the ACI required work experience (1500 hours per year for 3 years) and passing the written examination, with a score of 70% are certified as Concrete Flatwork Finisher & Technician.

ACI will also grant certification as a Concrete Flatwork Technician to those who pass the written examination with a score of at least 80%. Upon completion of the required work experience, a Technician can be certified as a Finisher.

- Prerequisites: none
- Length: 1 day from 8:00 AM - 4:30 PM
- Fee: \$195
- Instructor: Dan Frentress, PE

CFF&T	BASF Admixtures, Eagan*	Jan 28, 2009
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(Note: a minimum of 10 students required to hold class)

*BASF is formerly Degussa Admixtures

Concrete Plant 1 and 2 Certification and Recertification

Concrete Plant 1

This course is to train and certify technicians in concrete producing plants to meet the requirements of the Certified Ready Mix Plant Specifications. The instruction covers the sampling and gradation of aggregates as well as moisture determinations and batch adjustments. No laboratory work is included in this class. For certification, the student must pass a written exam with a score of at least 70%. Student must be familiar with calculations using a hand-held calculator.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Aggregate Production
- Length: 2 days (1 College Credit) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 12 PDH
- Fee: \$255 (includes student manuals)
- Instructor: Doug Schwartz, PE, Dan Frentress, PE, and Wendy Garr, Concrete Engineering Specialist

CP1102	Mn/DOT Tng & Conf Ctr	Jan. 13-14, 2009
CP1103	Mn/DOT Bemidji	Mar. 4-5, 2009
CP1104	Mn/DOT Rochester	Mar. 10-11, 2009

Concrete Plant 1 Recertification

This class will review the requirements for ready mix concrete as detailed in the Mn/DOT Certified Plant specifications. Topics will include rates of testing, aggregate gradation and quality issues, moisture control in the mixes, record keeping, and technology updates.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Plant 1 Certification
- Length: 1 day 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 6 PDH
- Fee: \$150
- Instructors: Doug Schwartz, PE, Dan Frentress, PE, and Wendy Garr, Concrete Engineering Specialist

CP1R29	Mn/DOT Tng & Conf Ctr	Jan 12, 2009
CP1R30	Mn/DOT Willmar	Jan 29, 2009
CP1R31	Mn/DOT Duluth	Feb 3, 2009
CP1R32	Mn/DOT Baxter	Feb 5, 2009
CP1R33	Mn/DOT Bemidji	Mar 3, 2009
CP1R34	Mn/DOT Rochester	Mar 9, 2009

Concrete Plant 2

This course is for managers, quality control personnel, and inspectors in concrete producing plants who require Level 2 certification to meet the specifications for Certified Ready Mix plants. The course will relate specific performance requirements to the concrete mix design and production controls to produce the specified mixes. The course covers ACI mix design procedures and specific Mn/DOT requirements as well as aggregate and admixture technology. Mn/DOT Plant 2 Certification will be based on satisfactorily passing the course examination and completing a detailed mix design.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Plant Level 1
- Length: 4 days (2 College Credits) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 24 PDH
- Fee: \$590 (includes student manuals)
- Instructor: Dr. Ken Hover, PE and Doug Schwartz, PE

CP2031	Mn/DOT Tng & Conf Ctr	May 4-7, 2009
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Note: A minimum of 25 students required to hold class

Concrete Plant 2 Recertification

This review is for individuals who have attended the Concrete Plant 2 course. The topics will include an update in performance requirements and mix designs for concrete. Additional discussion will include quality issues and technology updates. **This will be the only session available for Concrete Plant 2 Recertification.**

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Plant Level 2
- Length: 1 day (1 College Credit) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 6 PDH
- Fee: \$150
- Instructor: Doug Schwartz, PE, Wendy Garr, Concrete Engineering Specialist, and Maria Masten, PE, Mn/DOT Concrete Office

CP2R09	Mn/DOT Tng & Conf Ctr	Dec. 12, 2008
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AGGREGATE & READY MIX
ASSOCIATION OF MINNESOTA

Registration Office
12300 Dupont Avenue South
Burnsville, MN 55337
www.armofmn.com
registration@armofmn.com

Registration Information

Registrations will be processed on a first come–first served basis. The class sizes are limited, so early registrations are suggested to obtain the date preferred. **All registrations must be accompanied by a check or credit card number. REGISTRATIONS WILL NOT BE PROCESSED WITHOUT PAYMENT AND A Mn/DOT TECH ID #.** (Purchase orders will not be accepted.) Organizations sending several individuals may pay with one check if desired.

Registrations will be confirmed on a daily basis **via email** and U.S. Mail. If you have not received a class or waiting list confirmation notice within two to three weeks, please contact the ARM Registration office to ensure your registration has been received. The confirmation letter will include class date, location and general directions. Hotel recommendations are listed on the ARM web site (www.armofmn.com) and lodging reservations are the responsibility of the student.

If a registrant's class choices are full, the student will be contacted with alternative options. If all classes are full, the registrant will be placed on a waiting list and will be notified of openings at any location on any date unless otherwise specified.

Individuals who have a disability, either permanent or temporary, which might affect their ability to perform in a class should indicate the disability on the attached registration form or contact the ARM Registration Office at (888) 733-4649 or registration@armofmn.com.

Cancellation Policy

Cancellations and class changes must be made in writing and received by the ARM Registration office at **least seven (7) calendar days** prior to the class. No refunds will be issued after that time. Companies may opt to send replacements to a class. If a student misses a class they are required to re-register and resubmit the class fee.

Cancellations may be mailed to the address on the brochure cover, emailed to registration@armofmn.com or faxed to (952) 707-1251. If faxing, it is **your responsibility** to make sure the transmission is confirmed.

Course Rescheduling & Cancellation

ARM, Mn/DOT, and Lake Superior College reserve the right to reschedule and/or cancel courses due to insufficient registrations. Students registered in those classes will be notified and offered an alternative date and/or location, or a refund if requested.

Retesting – ACI Concrete Field 1

Retesting must occur in conjunction with a scheduled Concrete Field 1 course for the \$125 fee. If a student fails either the written or performance part of the ACI Field 1 certification examination, retesting is available on request to the ARM Registration office. A fee of \$125 is charged to cover the cost of processing the ACI exam.

Retesting for any of the other classes can be scheduled through the Mn/DOT Technical Certification office in St. Paul by calling 651-366-4201.

Student Information Updates

If a student has a change of job, address, or phone prior to attending their classes, please contact the ARM Registration office with the updated information.

***Please note:** The Mn/DOT Trg & Conf Ctr is also known as the Arden Hills Training Center. The Mn/DOT Materials Lab is also known as Maplewood Lab. Duluth "LSC" is Duluth Lake Superior College.