



Candidate Information Bulletin

City of Minneapolis

Construction Trade Examinations

In addition to state licensure, the City of Minneapolis requires certification for persons who work in installation, alteration, repair, and service of equipment and systems in a given trade. The City has contracted with Prometric Inc. to conduct its examination program.

At a glance

This bulletin is your guide to the process of obtaining a Minneapolis Certificate of Competency in one of the following classes: **plumber/gasfitter, warm air ventilation, refrigeration, gasfitter, steam and hot water, and oil burner.** The steps below summarize the process.



To obtain your certificate

- 1** Submit an Application for Eligibility to Prometric. Applications are available at www.prometric.com/minnesota.
- 2** When your application is approved, you will receive a Candidate Information Bulletin (Bulletin) that includes the Exam Registration Form. Register and schedule the approved exam with Prometric.
- 3** Prepare for your exam using this bulletin and other materials—Page 6.
- 4** Present the required identification; then take the exam—Page 4.
If you pass, follow the instructions on your score report to obtain the applicable competency card.



To get answers not provided in this bulletin

For questions about exams:

Prometric
 1260 Energy Lane
 St. Paul, MN 55108
 Phone: 800.742.8738
 Fax: 800.347.9242
www.prometric.com/minnesota

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Submitting your Application for Eligibility

Submit an Application for Eligibility (available at www.prometric.com/minnesota) to Prometric. When you are approved to take your exam(s), you will receive a Candidate Information Bulletin (bulletin) that includes the Exam Registration Form.

Plumber/Gasfitter applicants may only apply for the same level of Minneapolis certificate as the State of Minnesota license that they hold.



Note You must pass your exam (Plumber/Gasfitter applicants must pass **both** parts) within one year of receiving exam eligibility approval or you will be required to submit another Application for Eligibility and \$20 processing fee.

If you are not approved to take the exam(s), your original application will be returned to you, with a letter of explanation, approximately 10 business days after mailing the Application for Eligibility to Prometric. You may resubmit the application **after** meeting the requirements outlined in the letter of explanation.

Registering for an exam

Once you receive approval to take an examination, you may register and schedule your exam. Your exam will be given by computer at a Prometric test center. Test centers in Minnesota are located in Arden Hills, Duluth, Edina, Rochester and Woodbury. A complete list of test centers, addresses and directions are available online at www.prometric.com/minnesota.

Accommodations. If you require ADA accommodation, see “Special consideration” on Page 3 before registering.

You are encouraged to register and schedule at one time using Prometric’s Internet registration and scheduling system. Registration and scheduling are also available by phone. If you prefer, you can register by fax or by mail, which is a two-step process.

On the Internet—register and schedule at any time

Register and schedule your exam online at any time using our Internet Registration Service. Just follow these steps.

- 1 Access www.prometric.com/minnesota.
- 2 Under **Construction**, click on the **City of Minneapolis construction license exams** link and follow the prompts.

By phone—a one-step process

You may register and schedule your examination by calling 800.742.8738 between 7 a.m. and 8 p.m. (Central time), Monday through Friday. Please have your exam registration form and your Visa or MasterCard information available. At the end of the call, you will be given a number confirming your appointment. Record and keep this confirmation number for your records.

By fax or mail—a two-step process

You can register and schedule by fax or mail in two steps: (1) register by fax or mail and pay your exam fee and (2) schedule your exam appointment by phone.

You may fax your completed exam registration form (Page 13) to Prometric at 800.347.9242. You must include the Visa or MasterCard number and the cardholder’s signature on the fax.

You may mail your completed exam registration form (Page 13) and the appropriate exam fee. When registering by mail, you may pay the exam fee by including a company check, cashier’s check, money order, or Visa or MasterCard information.

Personal checks and cash are not accepted.

Faxed and mailed registrations are processed within 24 hours, or one business day, of receipt. Please allow four to eight days for delivery of mailed registrations. Once your registration has been processed, you can **schedule** an appointment by calling 800.742.8738. Please **record and retain** the number confirming your appointment.



Note Exam registrations are valid for 90 days from the date processed at Prometric. After that, your registration will expire without further notice and your exam fee will be forfeited. **The exam fee is nonrefundable and nontransferable.**

**Rescheduling
an exam**

To avoid a rescheduling fee, you must contact Prometric at least **three full business days** before the day of your scheduled appointment. **Before you reschedule your exam**, refer to the following table to determine the **last day** you may reschedule without paying a \$40 rescheduling fee.

Last day to reschedule
with no fee

If your exam is on:	Call by 7 p.m. (Central time) the previous:
Monday	Tuesday
Tuesday	Wednesday
Wednesday	Thursday
Thursday	Friday
Friday	Monday

Note that this schedule **does not** include holidays. Since holidays are not business days, they do not count against the three days (call earlier).

If you do not allow at least three full business days to reschedule your appointment, you will need to pay a \$40 rescheduling fee and schedule another exam appointment.

If absent or late for your appointment

If you miss your appointment or arrive late and are not allowed to test, you must pay a \$40 rescheduling fee before choosing another appointment. This fee will allow you to use your original exam registration.

If you are unable to attend your scheduled exam due to illness or emergency, call Prometric. Under certain circumstances, the fee to reschedule may be waived. Prometric reserves the right to request documentation to support any illness or emergency claim.

Emergency closings

Severe weather or an emergency could require canceling scheduled exams. If this occurs, Prometric will attempt to contact you by phone or e-mail; however, you may check for testing site closures by calling Prometric. If the site is closed, your exam will be rescheduled without a rescheduling fee.

If a test center is open for testing and you choose not to appear for your appointment, you must pay a \$40 rescheduling fee before choosing another appointment.

**Special
consideration**

ADA accommodation. If you require testing accommodations under the Americans with Disabilities Act (ADA), please call Prometric at 888.226.9406 to obtain an accommodation request form. Reasonable testing accommodations are provided to allow candidates with documented disabilities recognized under the ADA an opportunity to demonstrate their skills and knowledge.

Submit professional documentation of your disability with your form to help us determine the necessary testing arrangements. Thirty days' advance notice is required for all special testing arrangements. There is no additional charge for these accommodations.

ESL note. If English is your second language, please note that a language barrier is not considered a disability.

What to bring on exam day

You should arrive at least **30 minutes before** your scheduled exam appointment. This allows time for you to sign in, have your photo taken and for staff to verify your identification and supporting materials.

Identification required. You must present a valid form of identification before you can test. That identification document **must**:

- Be government-issued (e.g., driver's license, state-issued identification card, military identification card or passport).
- Contain **both** a current photo (or a physical description) and your signature.
- Have a name that exactly matches the name used to register for the exam (including designations such as "Jr." and "III").



Important Failure to provide appropriate identification at the time of the exam is considered a missed appointment.

If you cannot provide the identification listed above, contact Prometric **before** scheduling your appointment to arrange an alternative way to meet this requirement.

Test center regulations

To ensure that all candidates are tested under equally favorable conditions, the following regulations and procedures will be observed at each test center. Failure to follow any of these security procedures may result in the disqualification of your exam. Prometric reserves the right to audio and videotape any examination session.

References

- Only approved references are allowed during the exam. Photocopies of reference materials may **not** be used. Sharing reference materials is not allowed. No handwritten or additional notes (letters, words, diagrams, etc.) are allowed in reference books. Any reference material that has been written in during the exam will be confiscated. Highlighting and permanent tabbing added before your arrival at the test center are acceptable. Post-it® notes are not considered permanent tabbing and will not be allowed.
- Reference materials will be checked at the examination site before and after the exams.
- No other reference materials, papers or study materials are allowed at the test center. If you are found with these or any other aids, you will not be allowed to continue the exam and your answers will not be scored.

Calculators

- A calculator or slide rule is allowed. Only silent, handheld, solar or battery-operated, nonprogrammable calculators (without paper tape-printing capabilities or alphabetic keypads) may be used. Calculators will be provided at the test center.

Personal items

We recommend that you avoid bringing personal items to the test center. Note the following:

- Electronic equipment—cell phones, PDAs, pagers, cameras, tape recorders, etc.—is not permitted in the testing area.
- Other personal items—watches, briefcases, backpacks, etc.—are not permitted in the testing area. **Note:** It is recommended that purses not be brought to the test center as access to purses will not be allowed during testing.

Breaks

- If you leave the testing room while an exam is in progress, you must sign out/in on the roster and you will lose exam time.
- You are not allowed to use any electronic devices or phones during breaks.

Visitors

- No guests, visitors or family members are allowed in the testing area.

Misconduct or disruptive behavior

- Candidates who engage in any kind of misconduct or disruptive or offensive behavior may be dismissed from the examination. Examples are: giving or receiving help, taking part in an act of impersonation, removing test materials or notes from the testing room, using rude or offensive language and behavior that delays or interrupts testing.

Weapons

- Weapons are not allowed at the test center.



Important Every time you enter the test room, you will be asked to turn your pockets inside out to confirm that you have no prohibited items. The test center administrator will collect any materials that violate the rules.

Copyrighted questions. All test questions are the property of Prometric Inc. and are protected by copyright. Federal law provides severe civil and criminal penalties for the unauthorized reproduction, distribution, or exhibition of copyrighted materials.

If questions arise. Test center administrators are not allowed to answer any questions pertaining to the exam content. If you do not understand a question on the exam, you should answer the question to the best of your ability.

Your exam results

Scores are based on the number of questions answered correctly. You will not be given credit for any question answered incorrectly, marked with more than one answer or left blank. There is no penalty for guessing, so be sure to mark an answer for each question.

Passing score. At the end of your exam, your score will be shown on the screen and you will receive a printed, photo-bearing score report. You will be required to sign and date the score report at the test center.

Obtaining a Certificate of Competency. To obtain your certificate, you must send a copy or copies of your passing score report(s) with a check or money order in the amount of \$30 per trade to the City of Minneapolis at the address below.

City of Minneapolis
 250 South Fourth Street, Room 300
 Minneapolis, MN 55415
www.ci.minneapolis.mn.us/mdr/compcards/



Important You have one year from the date you passed your exam to submit your scores and certificate application.

Retake information. If you do not pass the exam, you must wait 90 days before retaking the exam. After 90 days, you may schedule another exam appointment by following the exam registration procedures outlined on Page 2. Another exam fee is required.

Duplicate score report. To obtain a duplicate score report, call Prometric at 800.742.8738. There is a \$25 fee per score report per exam.

Appeals process

Our goal is to provide a quality exam and a pleasant testing experience for every candidate. If you are dissatisfied with either and believe we can correct the problem, we would like to hear from you. We provide an opportunity for general comments at the end of your exam. Your comments will be reviewed by our personnel, but you will not receive a direct response.

If you are requesting a response about exam content, registration, scheduling or test administration (testing site procedures, equipment, personnel, etc.), please submit an appeal in writing. Your appeal letter must provide your name and Social Security number, the exam title, the date you tested and the details of your concern, including all relevant facts. Be sure to include your signature and return address. Mail your appeal letter to:

Prometric
ATTN: Appeals Committee
 1260 Energy Lane
 St. Paul, MN 55108

The Appeals Committee will review your concern and send you a written response within 10 business days of receipt. **Faxed appeals are not accepted** because an original signature is required.

Exam content outlines

The City of Minneapolis Certification exams are open book and consist of multiple-choice questions.

The outlines that follow list the number of questions in each exam, length of the exam, content areas covered in each exam, the percent required to pass each exam and the percentage of questions asked from each subject area.

Exam references. Each outline lists the references used to create the exam, including those references you may use during the exam. For information on how to obtain exam references, call toll-free 877.624.2562.



Note You may use newer editions of references than listed in the content outline as they become available at your own discretion. However, newer editions may or may not contain applicable information to the content on the exam. You assume the risk of using a more current reference than that listed in the content outline.

Minneapolis Master Plumber – Part 1
Open Book, 100 questions, 3 hours,
70% correct required to pass

Scope – Tests a candidate’s knowledge of installation, repair, maintenance or extension of any plumbing system, including drain, waste, vents, water supply and fixtures and also install, maintain or repair gas piping, appliances, vents, tanks and other related appurtenances within the scope of the Minnesota Plumbing Code, and Minneapolis Ordinance Chapter 278.

Subject Area	Percentage
General Knowledge	10
General Regulations	10
Plumbing Fixtures	15
Water Supply Systems	20
Drain, Waste and Vents	20
Indirect Wastes	5
Roof Drains	5
Backflow Prevention	5
Specialty Plumbing Systems	5
Business Mathematics	5

References allowed during the exam

1	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code, 2004</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
AND/OR candidates may use:	
2	<i>Minnesota Plumbing Code, 2003</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
3	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
4	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .

References used to create exam questions but not allowed during the exam

1	<i>Mathematics for Plumbers and Pipefitters</i> , Sixth Edition, 2004, Thomson Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .
2	<i>Plumbing Design and Installation</i> , Second Edition, 2002, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .

Minneapolis Master Plumber – Part 2
Open Book, 40 questions, 3 hours,
70% correct required to pass

Subject Area	Percentage
Isometric Analysis	38
Gas Piping	38
Fuel Gas Venting	12
Burners	12

References allowed during the exam

- 1 *Minnesota State Mechanical, Fuel Gas and Plumbing Code*, 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

AND/OR candidates may use:

- 2 *Minnesota Plumbing Code*, 2003, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
- 3 *International Mechanical Code 2000 with Minnesota Mechanical Amendments*, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
- 4 *International Fuel Gas Code 2000 with Minnesota Gas Amendments*, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam

- 1 *Mathematics for Plumbers and Pipefitters*, Sixth Edition, 2004, Thomson Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com.
- 2 *Plumbing Design and Installation*, Second Edition, 2002, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.

Minneapolis Journeyman Plumber – Part 1
Open Book, 100 questions, 3 hours,
70% correct required to pass

Scope – Tests a candidate’s knowledge of installation, repair, maintenance or extension of any plumbing system, including drain, waste, vents, water supply and fixtures and also install, maintain or repair gas piping, appliances, vents, tanks and other related appurtenances within the scope of the Minnesota Plumbing Code, and Minneapolis Ordinance Chapter 278.

Subject Area	Percentage
General Knowledge	10
General Regulations	10
Plumbing Fixtures	15
Water Supply Systems	20
Drain, Waste and Vents	20
Indirect Wastes	10
Roof Drains	5
Backflow Prevention	5
Specialty Plumbing Systems	5

References allowed during the exam

- 1 *Minnesota State Mechanical, Fuel Gas and Plumbing Code*, 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
- AND/OR candidates may use:**
- 2 *Minnesota Plumbing Code*, 2003, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
 - 3 *International Mechanical Code 2000 with Minnesota Mechanical Amendments*, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
 - 4 *International Fuel Gas Code 2000 with Minnesota Gas Amendments*, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam

- 1 *Mathematics for Plumbers and Pipefitters*, Sixth Edition, 2004, Thomson Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com.
- 2 *Plumbing Design and Installation*, Second Edition, 2002, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.

Minneapolis Journeyman Plumber – Part 2
Open Book, 40 questions, 3 hours,
70% correct required to pass

Subject Area	Percentage
Isometric Analysis	38
Gas Piping	38
Fuel Gas Venting	12
Burners	12

References allowed during the exam

- 1 *Minnesota State Mechanical, Fuel Gas and Plumbing Code*, 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
- AND/OR candidates may use:**
- 2 *Minnesota Plumbing Code*, 2003, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
 - 3 *International Mechanical Code 2000 with Minnesota Mechanical Amendments*, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
 - 4 *International Fuel Gas Code 2000 with Minnesota Gas Amendments*, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam

- 1 *Mathematics for Plumbers and Pipefitters*, Sixth Edition, 2004, Thomson Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com.
- 2 *Plumbing Design and Installation*, Second Edition, 2002, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.

EXAM CONTENT OUTLINES

Minneapolis Master Warm Air Ventilation
Open Book, 100 questions, 4 hours,
80% correct required to pass

Scope – Tests a candidate’s knowledge of the design, install and maintain air handling equipment and air distribution systems for heating, ventilation or air conditioning and to supervise and direct the work of others engaged in the same.

Subject Area	Percentage
General Air Conditioning	20
Warm Air Heating	15
Ventilation	23
Sheet Metal	18
Load Calculations	8
Insulation	5
Fuel Gas Systems	3
Piping	3
Safety	5

References allowed during the exam	
1	<i>ASHRAE Standard 62.1-2004 - Ventilation for Acceptable Indoor Air Quality</i> , 2004, American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE Atlanta, GA 30329, www.ashrae.org.
2	<i>HVAC Duct Construction Standards - Metal and Flexible</i> , Third Edition, 2005, Sheet Metal and Air Conditioning Contractors National Association (SMACNA), 4201 Lafayette Center Drive, Chantilly, VA 20151, www.smacna.org.
3	<i>NFPA 96 - Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations</i> , 2004, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org.
4	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
5	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
6	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>ACCA Duct Slide Rule</i> , Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
2	<i>Code of Federal Regulations, Title 29, Part 1926 (OSHA)</i> , 2005, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
3	<i>Manual D – Residential Duct Systems</i> , 1995 Edition, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
4	<i>Manual J – Residential Load Calculation</i> , Eighth Edition, 2002, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.

References used to create exam questions but not allowed during the exam	
5	<i>Manual N – Commercial Load Calculation</i> , Fourth Edition, 1988, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
6	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Wilcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.
7	<i>Sheet Metal</i> , Second Edition, 2006, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.

Minneapolis Journeyman Warm Air Ventilation
Open Book, 80 questions, 3 hours,
75% correct required to pass

Scope – Tests a candidate’s knowledge of the design, install and maintain air handling equipment and air distribution systems for heating, ventilation or air conditioning.

Subject Area	Percentage
General Air Conditioning	19
Warm Air Heating	19
Ventilation	26
Sheet Metal	19
Insulation	10
Fuel Gas Systems	4
Piping	4

References allowed during the exam	
1	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
2	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
3	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>ACCA Duct Slide Rule</i> , Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
2	<i>Fibrous Glass Duct Construction Standards</i> , Fifth Edition, 2002, North American Insulation Manufacturers Association (NAIMA), 44 Canal Center Plaza, Suite 310, Alexandria, VA 22314, www.naima.org.
3	<i>Manual D – Residential Duct Systems</i> , 1995 Edition, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
4	<i>Manual J – Residential Load Calculation</i> , Eighth Edition, 2002, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
5	<i>Manual N – Commercial Load Calculation</i> , Fourth Edition, 1988, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.

References used to create exam questions but not allowed during the exam	
6	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Wilcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.
7	<i>Sheet Metal</i> , Second Edition, 2006, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.
8	<i>Trane Ductulator</i> , TRANE Company, c/o Inland Marketing Services, 3030 Airport Road, La Crosse, WI 54603, www.trane.com/bookstore.

Minneapolis Master Refrigeration
Open Book, 80 questions, 3 hours,
80% correct required to pass

Scope – Tests a candidate’s knowledge of the install, maintain, repair or alter any system of refrigeration or comfort cooling unlimited to tons or horsepower, and to supervise and direct the work of others engaged in the same.

Subject Area	Percentage
HARV General	25
Commercial Refrigeration Systems	25
Controls	15
Ventilation	10
Piping and Tubing	10
Refrigeration Gases (Reclaim)	5
Box Construction	5
Safety	5

References allowed during the exam	
1	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Wilcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.
2	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
3	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
4	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>Code of Federal Regulations, Title 29, Part 1926 (OSHA)</i> , 2005, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
2	<i>Carrier System Design Manual - Part III: Piping Design, Carrier</i> , 1960 Edition, Carrier Air Conditioning Company, Modern Marketing Concepts, ATTN: CTT Department, 140 Washington Avenue, Endicott, NY 13760, www.global.carrier.com.
3	<i>Pipefitters Handbook</i> , Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.

Minneapolis Journeyman Refrigeration
Open Book, 70 questions, 3 hours,
75% correct required to pass

Scope – Tests a candidate’s knowledge of the install, maintain, repair or alter any system of refrigeration or comfort cooling unlimited to tons or horsepower.

Subject Area	Percentage
HARV General	29
Commercial Refrigeration Systems	21
Controls	17
Ventilation	11
Piping and Tubing	11
Refrigeration Gases (Reclaim)	6
Box Construction	5

References allowed during the exam	
1	<i>Modern Refrigeration and Air Conditioning</i> , Eighteenth Edition, 2004, Goodheart-Wilcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.
2	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
3	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
4	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>Carrier System Design Manual - Part III: Piping Design, Carrier</i> , 1960 Edition, Carrier Air Conditioning Company, Modern Marketing Concepts, ATTN: CTT Department, 140 Washington Avenue, Endicott, NY 13760, www.global.carrier.com.
2	<i>Pipefitters Handbook</i> , Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.

Minneapolis Master Gasfitter
Open Book, 100 questions, 4 hours,
80% correct required to pass

Scope – Tests a candidate’s knowledge to install, maintain, repair, alter or extend gas piping, appliances, gas mains, lines, laterals, tanks, and other appurtenances in connection therewith, and to supervise and direct the work of others engaged in the same.

Subject Area	Percentage
General Knowledge	20
General Regulations	10
Components	10
Sizing and Design	20
Installation	15
Gas Venting	10
LP Gas Systems	5
Medium Pressure Gas	5
Safety	5

EXAM CONTENT OUTLINES

References allowed during the exam	
1	<i>NFPA 58 – Standard for the Storage and Handling of Liquefied Petroleum Gases (LP Gas Code)</i> , 2004, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org.
2	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
3	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
4	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>Code of Federal Regulations, Title 29, Part 1926 (OSHA)</i> , 2005, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
2	<i>Fundamentals of Gas Combustion</i> , Third Edition, 2001, American Gas Association (AGA), 400 N. Capitol Street NW, Washington, D.C. 20001, www.aga.org.
3	<i>Pipefitters Handbook</i> , Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.

Minneapolis Journeyman Gasfitter
Open Book, 80 questions, 3 hours,
75% correct required to pass

Scope – Tests a candidate’s knowledge to install, maintain, repair, alter or extend gas piping, appliances, gas mains, lines, laterals, tanks, and other appurtenances in connection therewith.

Subject Area	Percentage
General Knowledge	19
General Regulations	12
Components	12
Sizing and Design	19
Installation	15
Gas Venting	12
LP Gas Systems	6
Medium Pressure Gas	5

References allowed during the exam	
1	<i>NFPA 58 – Standard for the Storage and Handling of Liquefied Petroleum Gases (LP Gas Code)</i> , 2004, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org.
2	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
3	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
4	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>Fundamentals of Gas Combustion</i> , Third Edition, 2001, American Gas Association (AGA), 400 N. Capitol Street NW, Washington, D.C. 20001, www.aga.org.
2	<i>Pipefitters Handbook</i> , Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.

Minneapolis Master Steam and Hot Water
Open Book, 100 questions, 3 hours,
80% correct required to pass

Scope – Tests a candidate’s knowledge in the construction, installation, alteration, repair and service of steam and hot water heating systems and to supervise and direct the work of others engaged in the same.

Subject Area	Percentage
General Knowledge	15
General Regulations	10
Installation	10
Supports and Hangers	10
Pipe, Valves and Fittings	20
Tanks, Traps and Pumps	15
Radiant, Baseboard and Radiators	5
Boilers	10
Safety	5

Reference allowed during the exam	
1	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
AND/OR candidates may use:	
2	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.
3	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com.

References used to create exam questions but not allowed during the exam	
1	<i>ASHRAE Handbook - HVAC Systems and Equipment</i> , 2004 Edition, American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE Atlanta, GA 30329, www.ashrae.org.
2	<i>Audel® HVAC Fundamentals, Volume 1: Heating Systems, Furnaces, and Boilers</i> , Fourth Edition, 2004, Wiley Publishing Inc., 10475 Crosspoint Boulevard, Indianapolis, IN 46256, www.wiley.com.
3	<i>Code of Federal Regulations, Title 29, Part 1926 (OSHA)</i> , 2006, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
4	<i>High Pressure Boilers</i> , Third Edition, 2003, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.
5	<i>Low Pressure Boilers</i> , Second Edition, 2005, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com.
6	<i>Modern Hydronic Heating for Residential and Light Commercial Buildings</i> , Second Edition, 2004, Thomson Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com.

**Minneapolis Journeyman
Steam and Hot Water**
Open Book, 80 questions, 2 hours,
75% correct required to pass

Scope – Tests a candidate’s knowledge in the construction, installation, alteration, repair and service of steam and hot water heating systems.

Subject Area	Percentage
General Knowledge	12
General Regulations	7
Installation	12
Supports and Hangers	7
Pipe, Valves and Fittings	18
Tanks, Traps and Pumps	18
Radiant, Baseboard and Radiators	12
Boilers	12

Reference allowed during the exam

1	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
	AND/OR candidates may use:
2	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
3	<i>International Fuel Gas Code 2000 with Minnesota Gas Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .

References used to create exam questions but not allowed during the exam

1	<i>ASHRAE Handbook - HVAC Systems and Equipment</i> , 2004 Edition, American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE Atlanta, GA 30329, www.ashrae.org .
2	<i>Audel® HVAC Fundamentals, Volume 1: Heating Systems, Furnaces, and Boilers</i> , Fourth Edition, 2004, Wiley Publishing Inc., 10475 Crosspoint Boulevard, Indianapolis, IN 46256, www.wiley.com .
3	<i>High Pressure Boilers</i> , Third Edition, 2003, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
4	<i>Low Pressure Boilers</i> , Second Edition, 2005, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, www.go2atp.com .
5	<i>Modern Hydronic Heating for Residential and Light Commercial Buildings</i> , Second Edition, 2004, Thomson Delmar Learning, P.O. Box 6904, Florence, KY 41022, www.delmarlearning.com .

Minneapolis Master Oil Burner
Open Book, 80 questions, 2-1/2 hours,
80% correct required to pass

Scope – Tests a candidate’s knowledge to install, maintain, repair, alter or extend oil piping, oil mains, burners, controls, pumps, tanks, and other appurtenances in connection therewith and to supervise and direct the work of others engaged in the same.

Subject Area	Percentage
General Knowledge	20
General Regulations	10
Controls	8
Installation	12
Burners	15
Piping, Valves and Tanks	12
Chimneys, Flues and Vents	12
Safety	10

References allowed during the exam

1	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
2	<i>NFPA 30 – Flammable and Combustible Liquids Code</i> , 2003 Edition, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
3	<i>NFPA 31 – Standard for the Installation of Oil Burning Equipment</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
	AND/OR candidates may use:
4	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .

References used to create exam questions but not allowed during the exam

1	<i>ASHRAE Handbook - HVAC Systems and Equipment</i> , 2004 Edition, American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE Atlanta, GA 30329, www.ashrae.org .
2	<i>Audel® HVAC Fundamentals, Volume 1: Heating Systems, Furnaces, and Boilers</i> , Fourth Edition, 2004, Wiley Publishing Inc., 10475 Crosspoint Boulevard, Indianapolis, IN 46256, www.wiley.com .
3	<i>Code of Federal Regulations, Title 29, Part 1926 (OSHA)</i> , 2005, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov .
4	<i>Oil Heat Technician's Manual</i> , 2002, National Oilheat Research Alliance (NORA), P.O. Box 314, Watertown, MA 02471, www.norastore.org .

EXAM CONTENT OUTLINES

**Minneapolis Journeyman Oil Burner
Open Book, 70 questions, 2 hours,
75% correct required to pass**

Scope – Tests a candidate’s knowledge to install, maintain, repair, alter or extend oil piping, oil mains, burners, controls, pumps, tanks, and other appurtenances in connection therewith.

Subject Area	Percentage
General Knowledge	23
General Regulations	12
Controls	8
Installation	14
Burners	17
Piping, Valves and Tanks	14
Chimneys, Flues and Vents	12

References allowed during the exam

1	<i>Minnesota State Mechanical, Fuel Gas and Plumbing Code</i> , 2004, Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .
2	<i>NFPA 30 – Flammable and Combustible Liquids Code</i> , 2003 Edition, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
3	<i>NFPA 31 – Standard for the Installation of Oil Burning Equipment</i> , 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101, www.nfpa.org .
AND/OR candidates may use:	
4	<i>International Mechanical Code 2000 with Minnesota Mechanical Amendments</i> , Minnesota’s Bookstore, 660 Olive Street, St. Paul, MN 55155, www.minnesotasbookstore.com .

References used to create exam questions but not allowed during the exam

1	<i>ASHRAE Handbook - HVAC Systems and Equipment</i> , 2004 Edition, American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE Atlanta, GA 30329, www.ashrae.org .
2	<i>Audel® HVAC Fundamentals, Volume 1: Heating Systems, Furnaces, and Boilers</i> , Fourth Edition, 2004, Wiley Publishing Inc., 10475 Crosspoint Boulevard, Indianapolis, IN 46256, www.wiley.com .
3	<i>Oil Heat Technician's Manual</i> , 2002, National Oilheat Research Alliance (NORA), P.O. Box 314, Watertown, MA 02471, www.norastore.org .



Exam Registration Form

Minneapolis Construction Trade Exams

(IMPORTANT: You must receive exam eligibility approval before submitting this form)

Candidate Information

Last Name	First Name	Middle Name	Social Security Number ____-____-____
Street Address (including Apt. number or P.O. Box, if applicable)			Date of Birth
City		State	ZIP Code
Daytime Phone (including area code) ()		Evening Phone (including area code) ()	

Exam Selection and Fees

Exam Title	Exam Fee	Total
Master Plumber, Part 1	\$60	\$
Master Plumber, Part 2	\$60	\$
Journeyman Plumber, Part 1	\$60	\$
Journeyman Plumber, Part 2	\$60	\$
Master Warm Air Ventilation	\$80	\$
Journeyman Warm Air Ventilation	\$80	\$
Master Refrigeration	\$80	\$
Journeyman Refrigeration	\$80	\$
Master Gasfitter	\$80	\$
Journeyman Gasfitter	\$80	\$
Master Steam and Hot Water	\$80	\$
Journeyman Steam and Hot Water	\$80	\$
Master Oil Burner	\$80	\$
Journeyman Oil Burner	\$80	\$
Optional Services	Fee	
Duplicate Score Report (exam title and date: _____)	\$25	\$
	Total Fee	\$

Registration

By Internet: If paying with Visa or MasterCard, you may register online at www.prometric.com/minnesota.

By Phone: If paying with Visa or MasterCard, you may register by calling 800.742.8738.

By Fax: If paying with Visa or MasterCard, you may fax your registration to 800.347.9242.

By Mail: Payment may be made by Visa or MasterCard, company check, cashier's check or money order. **Personal checks and cash are not accepted. Fees are nonrefundable.** Send this completed form with the appropriate fee(s) to:

Prometric, ATTN: Minneapolis Construction Trade Exams, 1260 Energy Lane, St. Paul, MN 55108

If paying by credit card, please complete the information below.

Card Type (Check One) <input type="checkbox"/> MasterCard <input type="checkbox"/> Visa	Card Number	Expiration Date
Name of Cardholder (Print)		Signature of Cardholder

Signature of Candidate

By signing and submitting this form, I certify that I am the candidate named above and I agree to comply with all examination rules and regulations.

Signature: _____ Date: _____

(Keep a copy of this registration form for your records.)