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### Codes & Standards Included in MADCAD.com Online Library

#### **ASCE**

- ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures, Third Printing / 2010
- SEI/ASCE Standard 32 Design and Construction of Frost-Protected Shallow Foundations / 2001
- ASCE/SEI Standard 24 Flood Resistant Design and Construction / 2005

#### **ASHRAE**

- ASHRAE Standard 90.1-2007 Energy Standard for Buildings Except Low-Rise Residential Buildings (I-P Edition) (ANSI Approved; IESNA Co-sponsored) / 2007
- ASHRAE Standard 15-2010 Safety Standard for Refrigeration Systems and Standard 34-2010 - Designation and Classification of Refrigerants / 2010
- ASHRAE Standard 62.1-2010 Ventilation for Acceptable Indoor Air Quality / 2010
- ASHRAE Standard 140 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs (ANSI Approved) / 2007
- ASHRAE Standard 119-1988 (RA 2004) Air Leakage Performance for Detached Single-Family Residential Buildings (ANSI Approved) / 1988

#### **ASME**

- ASME A112.4.1 Water Heater Relief Valve Drain Tubes / 1993
- ASME A112.4.3 Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System / 1999
- ASME A112.4.2 Water Closet Personal Hygiene Devices / 2009
- ASME A112.36.2M Cleanouts / 1991
- ASME A112.21.2M Roof Drains / 1983
- ASME A112.6.3 Floor And Trench Drains / 2001
- ASME A112.19.7 Hydromassage Bathtub Appliances / 2006
- ASME A112.3.4 Macerating Toilet Systems and Related Components / 2000
- ASME B31.1 Power Piping / 2010
- ASME B31.3 Process Piping / 2010



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- ASME B36.10M Welded and Seamless Wrought Steel Pipe / 2004
- ASME CSD 1 Control and Safety Devices for Automatically Fired Boilers / 2009
- ASME A112.19.5 Trim for Water-Closet Bowls, Tanks and Urinals / 2005
- ASME B16.26 Standard for Cast Copper Alloy Fittings for Flared Copper Tubes / 2006
- ASME B16.12 Cast Iron Threaded Drainage Fittings / 1998
- ASME B16.18 Cast Copper Alloy Solder Joint Pressure Fittings / 2001
- ASME A17.1/CSA B44 Safety Code for Elevators and Escalators / 2007
- ASME B16.22 Wrought Copper And Copper Alloy Solder Joint Pressure Fittings / 2001
- ASME A112.14.4 Grease Removal Devices / 2001
- ASME A112.18.1 Plumbing Supply Fittings / 2005
- ASME A112.18.2 Plumbing Waste Fittings / 2005
- ASME A112.14.3 Grease Interceptors / 2000
- ASME A112.14.1 Backwater Valves / 2003
- ASME A112.19.4M Porcelain Enameled Formed Steel Plumbing Fixtures / 1994
- ASME A112.1.3 Air Gap Fittings for Use with Plumbing Fixtures, Appliances and Appurtenances / 2000
- ASME A112.18.3 Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings / 2002
- ASME A112.1.2 Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-Connected Receptors) / 2004
- ASME A112.19.1 Enameled Cast Iron Plumbing Fixtures / 1994
- ASME A112.19.2 Ceramic Plumbing Fixtures / 2008
- ASME A112.19.3/CSA B45.4 Stainless Steel Plumbing Fixtures / 2008
- ASME A112.18.6 Flexible Water Connectors / 2009
- ASME A112.19.19 Vitreous China Nonwater Urinals / 2006
- ASME A112.19.15 Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors / 2005
- ASME A112.18.7 Deck mounted Bath/Shower Transfer Valves with Integral Backflow Protection / 1999

## ASTM

- A74-09 Standard Specification for Cast Iron Soil Pipe and Fittings
- A888-09 Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications
- B32-08 Standard Specification for Solder Metal
- B42-02e1 Standard Specification for Seamless Copper Pipe, Standard Sizes
- B687-99(2005)e1 Standard Specification for Brass, Copper, and Chromium-Plated Pipe Nipples
- B75-02 Standard Specification for Seamless Copper Tube
- B813-00(2009) Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
- B828-02 Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings
- B88-03 Standard Specification for Seamless Copper Water Tube
- C1261-07 Standard Specification for Firebox Brick for Residential Fireplaces
- C1277-08 Standard Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
- C1283-07a Standard Practice for Installing Clay Flue Lining
- C129-06 Standard Specification for Nonloadbearing Concrete Masonry Units
- C1396/C1396M-13 Standard Specification for Gypsum Board
- C14-07 Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
- C143/C143M-08 Standard Test Method for Slump of Hydraulic-Cement Concrete
- C1461-08 Standard Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste, and Vent (DWV), Sewer, Sanitary, and Storm Plumbing Systems for Above and Below Ground Use
- C1540-08 Standard Specification for Heavy Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
- C28/C28M-00(2005) Standard Specification for Gypsum Plasters
- C296-00(2004)e1 Standard Specification for Asbestos-Cement Pressure Pipe
- C33-03 Standard Specification for Concrete Aggregates
- C475/C475M-02(2007) Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- C476-08 Standard Specification for Grout for Masonry



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- C55-01 Standard Specification for Concrete Brick
- C55-06e1 Standard Specification for Concrete Building Brick
- C564-08 Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings
- C59/C59M-00(2006) Standard Specification for Gypsum Casting Plaster and Gypsum Molding Plaster
- C62-08 Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)
- C630/C630M-03 Standard Specification for Water-Resistant Gypsum Backing Board
- C73-05 Standard Specification for Calcium Silicate Brick (Sand-Lime Brick)
- C90-00 Standard Specification for Loadbearing Concrete Masonry Units
- C90-08 Standard Specification for Loadbearing Concrete Masonry Units
- C91-05 Standard Specification for Masonry Cement
- C94/C94M-09 Standard Specification for Ready-Mixed Concrete
- D1785-06 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
- D1970-01 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
- D2235-04 Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
- D2239-03 Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
- D2466-06 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- D2609-02 Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe
- D2657-07 Standard Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings
- D2661-06 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
- D2665-09 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

- D2672-96a(2003) Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
- D2737-03 Standard Specification for Polyethylene (PE) Plastic Tubing
- D2751-05 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings (Redline)
- D2846/D2846M-09 Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
- D2949-01a(2008) Standard Specification for 3.25-in. Outside Diameter Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
- D3462-09 Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules
- D3679-09 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding
- D3957-06 Standard Practices for Establishing Stress Grades for Structural Members Used in Log Buildings
- D4869-05e1 Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing
- D6380-03(2009) Standard Specification for Asphalt Roll Roofing (Organic Felt)
- D7032-08 Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)
- E283-04 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- E814-08b Standard Test Method for Fire Tests of Penetration Firestop Systems
- E84-09 Standard Test Method for Surface Burning Characteristics of Building Materials
- E90-04 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- F1281-07 Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
- F1282-06 Standard Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe
- F1346-91(2003) Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs

- F1554-07a Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
- F1667-05 Standard Specification for Driven Fasteners: Nails, Spikes, and Staples
- F1807-08 Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing
- F1866-07 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
- F1960-09 Standard Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing
- F1974-08 Standard Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe
- F1986-01(2006) Standard Specification for Multilayer Pipe Type 2, Compression Fittings, and Compression Joints for Hot and Cold Drinking-Water Systems
- F2080-08 Standard Specification for Cold-Expansion Fittings With Metal Compression-Sleeves for Cross-Linked Polyethylene (PEX) Pipe
- F2090-08 Standard Specification for Window Fall Prevention Devices With Emergency Escape (Egress) Release Mechanisms
- F2098-08 Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal Insert and Plastic Insert Fittings
- F2159-05 Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing
- F2262-05 Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Tubing OD Controlled SDR9
- F2434-08 Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Tubing
- F405-05 Standard Specification for Corrugated Polyethylene (PE) Pipe and Fittings
- F409-02(2008) Standard Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings
- F437-06 Standard Specification for Threaded Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80



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- F441/F441M-02(2008) Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- F493-04 Standard Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
- F628-08 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core
- F656-08 Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings
- F876-08b Standard Specification for Crosslinked Polyethylene (PEX) Tubing
- F877-07 Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems

#### **AWWA**

- AWWA C511-07: Reduced Pressure Principle Backflow Prevention Assembly / 2007
- AWWA C510-07: Double Check Valve Backflow Prevention Assembly / 2007

#### **FEMA**

- FEMA TB-2 - Flood Damage-Resistant Materials Requirements / 2008
- FEMA TB-11 - Crawlspace Construction for Buildings Located in Special Flood Hazard Areas (FIA-TB-11) / 2001

#### **ICC**

- International Fire Code / 2012
- International Fuel Gas Code / 2012
- International Private Sewage Disposal Code / 2012
- ICC 500:Standard for the Design and Construction of Storm Shelters / 2008
- International Property Maintenance Code / 2012
- ICC 400-2012: Standard on the Design and Construction of Log Structures / 2012
- ICC/ANSI A117.1 / 2003
- ICC A117.1 Accessible and Usable Buildings and Facilities / 2009
- ICC 300-2012: Bleachers, Folding and Telescopic Seating, and Grandstands / 2012



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- Michigan Rehabilitation of Existing Building Code / 2009
- Michigan Residential Code / 2009
- Michigan Mechanical Code / 2012
- Michigan Plumbing Code / 2012
- Michigan Uniform Energy Code / 2009
- Michigan Building Code / 2009

### **NFPA**

- NFPA 10: Standard for Portable Fire Extinguishers / 2010
- NFPA 101: Life Safety Code / 2012
- NFPA 105: Standard for Smoke Door Assemblies and Other Opening Protectives / 2010
- NFPA 11: Standard for Low-, Medium-, and High-Expansion Foam / 2010
- NFPA 110: Standard for Emergency and Standby Power Systems / 2010
- NFPA 111: Standard on Stored Electrical Energy Emergency and Standby Power Systems / 2010
- NFPA 1124: Code for the Manufacturing, Transportation, Storage and Retail Sale of Fireworks and Pyrotechnic Articles / 2006
- NFPA 12: Standard on Carbon Dioxide Extinguishing Systems / 2011
- NFPA 120: Standard for Fire Prevention and Control in Coal Mines / 2010
- NFPA 12A: Standard on Halon 1301 Fire Extinguishing Systems / 2009
- NFPA 13: Standard for the Installation of Sprinkler Systems / 2010
- NFPA 13D: Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes / 2010
- NFPA 13R: Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height / 2007
- NFPA 13R: Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height / 2010
- NFPA 14: Standard for the Installation of Standpipe and Hose Systems / 2010
- NFPA 16: Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems / 2011
- NFPA 17: Standard for Dry Chemical Extinguishing Systems / 2009
- NFPA 170: Standard for Fire Safety Symbols / 2009
- NFPA 17A: Standard for Wet Chemical Extinguishing Systems / 2009





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- NFPA 20: Standard for the Installation of Stationary Pumps for Fire Protection / 2010
- NFPA 2001: Clean Agent Fire Extinguishing Systems / 2008
- NFPA 211: Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances / 2010
- NFPA 221: Standard for Fire Walls and Fire Barrier Walls / 2009
- NFPA 252: Standard Methods of Fire Tests of Door Assemblies / 2012
- NFPA 253: Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source / 2011
- NFPA 257: Standard on Fire Test for Window and Glass Block Assemblies / 2012
- NFPA 259: Standard Test Method for Potential Heat of Building Materials / 2008
- NFPA 265: Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls / 2011
- NFPA 268: Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source / 2012
- NFPA 275: Standard Method of Fire Tests for the Evaluation of Thermal Barriers Used Over Foam Plastic Insulation / 2009
- NFPA 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components / 2012
- NFPA 286: Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth / 2011
- NFPA 288: Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance-Rated Assemblies / 2012
- NFPA 289: Standard Method of Fire Test for Individual Fuel Packages / 2009
- NFPA 30: Flammable and Combustible Liquids Code / 2012
- NFPA 31: Standard for the Installation of Oil-Burning Equipment / 2006
- NFPA 31: Standard for the Installation of Oil-Burning Equipment / 2011
- NFPA 32: Standard for Drycleaning Plants / 2011
- NFPA 40: Standard for the Storage and Handling of Cellulose Nitrate Film / 2011
- NFPA 409: Standard on Aircraft Hangars / 2011
- NFPA 418: Standard for Heliports / 2011



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- NFPA 484: Standard for Combustible Metals / 2012
- NFPA 50: Standard for Bulk Oxygen Systems at Consumer Sites / 2001
- NFPA 51: Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes / 2007
- NFPA 58: Liquefied Petroleum Gas Code / 2011
- NFPA 61: Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities / 2008
- NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids / 2013
- NFPA 655: Standard for Prevention of Sulfur Fires and Explosions / 2012
- NFPA 664: Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities / 2012
- NFPA 70: National Electrical Code / 2011
- NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films / 2010
- NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response / 2012
- NFPA 72: National Fire Alarm and Signaling Code / 2010
- NFPA 720: Standard for the Installation of Household Carbon Monoxide (CO) Warning Equipment / 2009
- NFPA 80: Standard for Fire Doors and Other Opening Protectives / 2010
- NFPA 85: Boiler and Combustion Systems Hazards Code / 2011
- NFPA 92B: Standard for Smoke Management Systems in Malls, Atria, and Large Areas / 2009
- NFPA 96: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations / 2008
- NFPA 99: Health Care Facilities Code / 2012

#### **SMACNA**

- SMACNA Fibrous Glass Duct Construction Standards, 7th Edition / 2003
- SMACNA HVAC Duct Construction Standards - Metal and Flexible, 3rd Edition / 2005



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### **2012 Michigan State Codes**

- Michigan Building Code / 2012
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- Michigan Rehabilitation for Existing Buildings / 2012