

Building Department 507-437-9950 Fax: 507-437-7101 City of Austin 500 4th Ave NE Austin, MN 55912

MANUFACTURED HOMES

Manufactured Home Installation Requirements

- 1. A manufactured home permit is required prior to the installation of the manufactured home.
- The following information is required at time of permit application.
 a. Brand name of manufactured home, size, serial number and size of electrical service.
- 3. Provide support and anchoring plans (forms attached)
- 4. Skirting must be completed within 30 days of installation. Skirting shall be of metal, fiberglass, or comparable non-combustible materials and approved by the City of Austin Building Department. Skirting material to be painted to match the appropriate unit thus that it will enhance the appearance of the home.
- 5. Utilities Connection
 - a. Water connections. Water piping to manufactured homes shall comply with the Minnesota Plumbing Code, chapter 4715. Pipes shall be protected from freezing. Heat tape, when installed, shall be listed and installed in conformance with its listing and the manufacturer's instructions. When the manufactured home is installed on a support system subject to ground movement due to freezing and thawing, approved flexible connectors or semirigid copper tubing shall be used to prevent pipe breakage after connection
 - b. **Sewer connections.** Waste piping to manufactured homes shall comply with the Minnesota Plumbing Code, chapter 4715. When a manufactured home is installed on a support system subject to ground movement due to freezing and thawing, offsets or approved flexible connectors, or both, shall be used to prevent pipe breakage.
 - c. **Gas piping.** Gas piping to the manufactured home shall be of adequate capacity rating to supply the connected load. It shall be installed in compliance with the Minnesota State Mechanical Code, chapter 1346. When the manufactured home is installed on a support system subject to ground movement because of freezing and thawing, semirigid copper pipe or a listed manufactured home gas connector for exterior use only shall be installed to prevent pipe breakage. Gas piping shall be protected from physical damage.
 - Tests for gas piping. The manufactured home fuel gas piping system shall be tested d. before it is connected to the gas supply. Only air shall be used for the test. The manufactured home gas piping system shall be subjected to a pressure test with all appliance shutoff valves, except those ahead of fuel gas cooking appliances, in the open position. Appliance shutoff valves ahead of fuel gas cooking appliances shall be closed. The test shall consist of air pressure at not less than ten inches or more than 14 inches water column (six ounces to eight ounces per square inch). The system shall be isolated from the air pressure source and maintain this pressure for not less than ten minutes without perceptible leakage. Upon satisfactory completion of the test, the appliance valves ahead of fuel gas cooking appliances shall be opened, and the gas cooking appliance connectors tested with soapy water or bubble solution while tinder the pressure remaining in the piping system. Solutions used for testing for leakage shall not contain corrosive chemicals, Pressure shall be measured with either a manometer, slope gage, or gage calibrated in either water inches or pounds per square inch with increments of either one-tenth inch or one-tenth pounds per square inch, as applicable. Upon satisfactory completion of the test, the manufactured home gas supply connector shall be installed and the connections tested with soapy water or bubble solution.

e. **Electrical connections.** On-site electrical connections to the manufactured home and any on-site electrical wiring required to prepare the manufactured home for occupancy shall be done in conformance with the manufactured home building code and shall be installed and inspected as required by the Minnesota Electrical Act, Minnesota Statutes, sections 326.241 to 326.248.

STAT AUTH: MS § 327.33; 32713.01 to 327B.I2

HIST: 24 SR 1846

1350.3500 OBTAINING APPROVAL OF QUALITY CONTROL.

Subpart I. **Procedure.** To obtain quality control approval for an accessory structure manufacturing facility, a manufacturer shall submit a quality control manual pursuant to subpart 2, item A, and consent to investigations and inspections at reasonable hours by the commissioner for field verification of satisfactory quality control.

Subp. 2. Applications. Applications for approval of quality control manuals shall contain the following:

- A. an application in letter form to be accompanied by two copies of the quality control manual containing those items required by item B; and
- B. an outline of the procedure which will direct the manufacturer to construct accessary structures according to the approved plans specifying:
 - 1. scope and purpose;
 - 2. receiving inspection procedure for basic materials;
 - 3. material storage and stock rotation

1350.2600 INSTRUCTIONS AND DESIGNS.

Subpart 1. Manufacturer's installation instructions. Each manufactured home shall have its stabilizing system installed according to the manufactured home manufacturer's installation instructions. The manufacturer's instructions shall include a typical support system designed by an engineer or architect to support the anticipated loads that the manufacturer's installation instructions specify for the design zone, including the climatic region, of installation. The instructions shall also meet the requirements of parts 1350.3900 to 1350.5700, for manufactured homes manufactured prior to January 1, 2009. Manufactured homes manufactured on or after January 1, 2009, must comply with the manufacturer's instructions or Code of Federal Regulations, title 24, part 3285. These instructions shall be left with the manufactured home following the completion of the installation.

Footings shall be sized to support the loads shown in these instructions.

Stabilizing devices not provided with the manufactured home shall meet or exceed the design and capacity requirements of the manufactured home manufacturer and parts 1350.2500 to 1350.3200 and shall be installed according to the manufactured home manufacturer's installation instructions.

Foundation systems shall be in compliance with the State Building Code.

No portion of a manufactured home shall be removed during installation or when located on its home site unless it is designed to be removable and is removed according to the manufacturer's instructions.

Subpart 2 Stabilizing system design. Manufactured homes manufactured prior to September 1974 not provide with manufacturer's instructions for stabilizing devices and their installation shall be provided with anchoring and support systems designed by a registered professional engineer or shall comply with the following requirements:

A. The minimum number of ties per side for various lengths of manufactured homes shall be according to part 1350.3200.

- B. Ties shall be as evenly spaced as practicable along the length of the manufactured home with not more than eight feet open-end spacing on each end.
- C. When continuous straps are provided as vertical ties, the ties shall be positioned at rafters and studs. Where a vertical tie and diagonal tie are located at the same place, both ties may be connected to a single ground anchor, provided that the anchor used is capable of carrying both loadings.
- D. Clerestory roofs and add-on sections of expandable manufactured homes shall have provisions for vertical ties at the exposed ends.
- E. Protection shall be provided at sharp corners where the anchoring system requires the use of external cables or straps. Protection shall also be provided to minimize damage to roofing or siding by the cable or strap.
- F. If the alternate method incorporating baling straps specified in part 1350.3200 is used, the baling straps shall be wrapped completely around manufactured home passing under the main steel frame, with both ends of each strap fastened together under tension. The straps shall be according to part 1350.2800. The method used to connect the ends of the strap shall not reduce the allowable working load and overload.



- 1. I-beam frame
- 2. Gap between top of pier and main frame may be a wood plate (not exceeding 2" in thickness) and shims (not exceeding I" in thickness). Shims shall be at least 4" wide and 6" long, fitted and driven tight between wood plate or pier and main frame. Two inch or four inch solid concrete block may fill remainder of any gap.
- 3. Cap solid concrete block or equivalent, 4" x 16" x 16"
- 4. Reinforcing rods (normally 3/8" diameter steel rods placed in the pier corners, for per tier).
- 5. Double concrete blacks with any block cell filled with concrete, laid in concrete mortar with steel reinforcing bars inserted in the block cells.
- 6. Footing 16" x 16" x 4" solid concrete or other product approved for the purpose or, alternately, two 8' x 16' 4' solid concrete blocks with joint between blocks parallel to the steel I-beam frame.

Footing placed on firm undisturbed soil or on controlled fill free of grass or organic materials compacted to a minimum load-bearing capacity of 2000 PSF.

For piers exceeding 80 inches in height. Piers shall be securely attached to the frame of the mobile home or shall extend at least 6 inches from the centerline of the frame member.

Subp. 4. Piers over 80 inches tall reinforcement. (refer to figure 3300-4)

Approved support system for manufactured homes without specific footing as anchoring requirements.

- 1. <u>Footing</u> shall be at least 16" x 16" x 4" or other product approved for the use intended. As an alternate two 8" by 16" by 4" can be used as footing provided the joists between the blocks is parallel to the steel I-beam frame.
- 2. Piers less than 40 inches in height shall be constructed of open and closed cell, eight-Inch by 16-inch concrete blocks (with open cells vertically placed upon the footing). Single-stacked block piers shall be installed with 16-inch dimension perpendicular to the main (I-beam) frame. The piers shall be covered with a two-inch by eight-inch by 16-inch wood or concrete cap.

Piers between 40 to 80 inches in height and all corner piers over three blocks high shall be double blocked with blocks interlocked and capped with a four-inch by 16-inch by 16-inch solid concrete block, or equivalent. (See part 1350.3300, subpart2).

Piers over 80 inches in height shall be laid in concrete mortar and steel reinforcing bars inserted in block cells filled with concrete.

Elevated manufactured homes. When more than one-fourth of the area of a manufactured home is installed so that the bottom of the main frame members is more than three feet above ground level, the manufactured home stabilizing system shall be designed by a qualified registered professional engineer and the installation shall be approved prior to installing by the authority having jurisdiction.

Plates and hardwood shims. A cushion of wood plate not exceeding two inches in thickness and hardwood shims not exceeding one inch in thickness may be used to fill any gap between the top of the pier and the main frame. Two-inch or four-inch solid concrete blocks may be used to fill the remainder of any gap. Hardwood shims shall be at least four inches wide and six inches long and shall be fitted and driven tight between the wood plate or pier and main frame.

3. Clearance Above Ground. A minimum clearance of 12 inches shall be maintained beneath the underside of the main frame (I-beam or channel beam) in the area of utility connections when the manufactured home is not installed on a foundation system.

1350.3200 NUMBER OF TIES REQUIRED.

Number of Ties Required Per Side of Single Wide¹ Manufactured Homes².

This table is based on a minimum working load per anchor of 3,150 pounds with a 50 percent overload (4,725 pounds total).

1	2	3	4	5
			Alternate Method ⁴	
Length of Manufactured Home ³ (Feet)	No. of Vertical Ties	No. of Diagonal Ties⁵	No. of Baling Straps	No. of Diagonal Ties ⁶
up to 40	2	3	2	3
40-46	2	3	2	3
46-49	2	3	2	3
49-54	2	3	2	3
54-58	2	4	2	4
58-64	2	4	2	4
64-70	2	4	2	5
70-73	2	4	2	5
73-84	2	5	2	5

¹Double-wide manufactured homes require only the diagonal ties specified in column 3, and these shall be placed along the outer side walls.

²Except when the anchoring system is designed and approved by a registered professional engineer.

³Length of manufactured home (as used in this table) means length excluding draw bar.

⁴Alternate method. When this method is used, an approved reinforcement means shall be provided. If baling is used to accomplish this reinforcement, part 1350.2600, subpart 2, item F, applies.

⁵Diagonal ties in this method shall deviate at least 40 degrees from vertical.

⁶Diagonal ties in this method shall be 45 degrees + 5 degrees from vertical and shall be attached to the nearest main frame member.

SINGLE-WIDE SUPPORT PIER PLAN (TYPICAL)





MANUFACTURER INFORMATION

SOIL INFORMATION

Name	Classification No		
Home Size	_Soil Bearing Capaci	ty	
Maximum I-Beam Spacing	FOOTING INFORM	ATION	
Door Openings	I-Beam	X	X
I-Beam Loading PLF			
Maximum End Support (I-Beam)	-		
Grading to Slope AWAY From Home			

SINGLE-WIDE ANCHORING PLAN (TYPICAL)



MANUFACTURER INFORMATION	ANCHORING INFORMATION (con't)		
Name	Anchor Manufacturer		
Home Size	Lateral Anchors Req'd YES or NO		
Maximum I-Beam Spacing	Anchor P.N		
Maximum Anchor Spacing	Connector P.N		
SOIL INFORMATION	Longitudinal Anchors Req'd YES or NO		
Classification No	Anchor P.N		
Soil Bearing Capacity	Connector P.N		
ANCHORING INFORMATION	No. Per End		
Ext. Wall Height			
Roof Pitch	*P.N. = Part or Product Number		
Height From Ground to			
	7		

DOUBLE-WIDE SUPPORT PIER PLAN (TYPICAL)



MANUFACTURER INFORMATION	SOIL INFORMATION
Name	Classification No.
Home Size	Soil Bearing Capacity
Maximum I-Beam Spacing	FOOTING INFORMATION
Door Openings	I-Beam X X
I-Beam Loading PLF	Mate LineXX
Maximum End Support (I-Beam)	
Mate Line Loads	

DOUBLE-WIDE ANCHORING PLAN (TYPICAL)



*P.N. = Part or Product Number FRAME PIER SECTION VIEW



FROST DEPTH PIER SECTION VIEW



SETBACKS

NOTE THAT THE INFORMATION BELOW CONSISTS OF EXCERPTS, PRIMARILY REGARDING SETBACKS. THE COMPLETE TEXT REGARDING ZONING REGULATIONS FOR MANUFACTURED HOMES AND MANUFACTURED HOME PARKS MAY BE FOUND IN AUSTIN CITY CODE SECTIONS 11.33 AND 11.60.

Section 11.30 Subdivision 5.

- C. Required separation between manufactured homes.
 - 1. Manufactured homes shall be separated from each other and from other buildings and structures by at least 20 feet or the sum of the heights of both units, whichever is greater. Manufactured homes placed end-to-end must have minimum clearance of 15 feet.
 - 2. An accessory structure such as an awning, cabana, storage cabinet, carport, windbreak and porch which has a floor area exceeding 25 square feet, and has an opaque top or roof, shall for purposes of all separation requirements, be considered to be part of the manufactured home.
 - 3. Minimum lot sizes shall not be less than 3,500 square feet.

D. Open space and recreation area. Not less than 8% of the gross site area shall be devoted to recreation facilities, generally provided in a central location. In developments of 50 acres or more, recreation facilities can be decentralized with at least one area of open space to be two-thirds of an acre or more. Recreation area may include space for community buildings and community use facilities, such as indoor recreation area, swimming pool, hobby and repair shops and service buildings. Where individual lot areas are above minimum standards of 3,500 square feet per lot, and plans provide for substantial recreation facilities, the site of centralized recreation area shall be calculated on a basis of at least 100 square feet per lot, provided that no recreation area shall contain less than 5,000 square feet.

- E. Required setbacks. Buffer strips and screening:
 - 1. All manufactured homes shall be located at least 30 feet from any property boundary line abutting upon a public street or highway and at least 20 feet from other property boundary lines.
 - 2. There shall be a minimum distance of ten feet between the manufactured home stand and abutting interior public or private park street.
 - 3. All manufactured home parks located adjacent to residential, recreational, commercial or industrial land uses, shall provide screening such as fences, shrubs, trees, along the property boundary line separating the park and such uses, and shall be maintained in a neat and orderly fashion.

F. *Average density*. Notwithstanding the type of development concept used, the maximum density shall be seven manufactured homes per acre.

PLOT PLAN	
ADDRESS: LEGAL DESCRIPTION:	
LOT BLOCK ADDITION	
SITE AREA:SQ. FT. AREA OF SITE OCCUPIED BY B	BUILDING:SQ. FT.
INSTRUCTIONS TO APPLICANT: COVERAGE PERC	ENTAGE:%
 FOR NEW BUILDINGS AND BUILDING ADDITIONS THE FOLLOWING INFOR IN THE SPACE BELOW: 1) Location of proposed construction and existing improvements. 2) Show buildings (square footage) and setback distances of existing b a) How far the new building will be away from the front property b) How far the new building will be away from the side property c) How far the new building will be away from the rear property d) How far the new building will be away from existing structures 3) Show easements. 4) Indicate whether property is a corner lot. 5) Show street and avenue location. 	MATION MUST BE PROVIDED buildings and new structures. line. line.
REAR PROPERTY LINE	
L LINE	- LINE
	FRONT PROPERTY LINE FRONT PROPERTY LINE CITY SHOEWALK BACK OF CURB CENTERLINE OF STREET BACK OF CURB
SIGNATURE OF OWNER OR AUTHORIZED REPRESENTATIVE:	

Venue: Austin CITY OF AUSTIN, MN 500 FOURTH AVENUE NE PHONE: 507-437-9950 FAX: 507-437-7101

Storm

Prop. No.

Permit No.

BUILDING OFFICIAL OFFICE OF CITY ENGINEER

APPLICATION

	ION: R: RACTORS ADDRESS:		MN Licensed Installer Information:
License) No.:	_ EST. VALUE _	Applied For:
Clerk:			Zone:
WIDTH HEIGH	(FT.)		
CONST	RUCTED OF:		SIDE YD. SETBACK:
PLUMB	VD SETBACK:		AGREEMENT? HEATING CONTRACTOR? BECEIPT NO.:
Man	ufactured Home Set Up		
ewer Ava	ailability Charge		ZONING APPROVAL:
FEE:	Building Fee: Zoning Review Fee: State Surcharge Fee: TOTAL AMOUNT:	\$49.50 \$10.00 \$1.00 \$60.50	

Separate permits are required for electrical, plumbing, heating, ventilation or air conditioning. This permit becomes null and void if work or construction authorized is not commenced within 180 days, or if construction or work is suspended or abandoned for a period of 180 days at any time after work is commenced. I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provision of any other state or local law regulating construction or the performance of construction.

APPLICANT'S SIGNATURE	DATE
BLDG. OFFICIAL'S APPROVAL	DATE

City of Austin 500 Fourth Avenue Austin, Minnesota 559	N.E. AU 12-3773 GROWN	STIN NG TOGETHER	Build 507-437-99	ing Department 50 Fax 507-437-71	.01
Type the following information or pla	ce check marks in the appro	opriate boxes, then pr le 🦳 Multi Sectior	int the form. nal Home	Office Use On Application Approval	ly Number
Date of Manufacture as recorded on t	the home's Data Plate:			Received By	·
The home will be installed:	On Private Property	In a Manufactured H	Home Park	Date Received	
Proposed Start Date:	Completion D	ate:			
Foundation Type: Frost Piers	Crawl space Base	ement 🗌 Monolithi	c Slab 🔲 G	round Set	
Resident Name:			*		
Site Address:					
Phone #:		Cell #:			
Describe the work to be performed	under this application :				
Installer: Identify person responsib	le for the installation	MN Licensed In	staller	Home Owner	
Installer's Name:		Installer	License #:		
Address:	City:		Phone #:		
Above Installer is responsible for:	Foundation Ancho	oring 📋 Support Sys	item 🔲 Electrica	l 📃 Plumbing 📃	Gas/Me
Electrical Work: Identify the person Work. NOTE: Any electrical work perf park requires a MN electrical license.	on responsible for the Electr formed in a manufactured h	ical MN I ome MN Licen	icensed Electrical	Contractor <u></u> Hon	ne Own
Elec Contractor Name:		Address :			
City:	Office Phone:		Cell #:	,	
Plumbing Work: Identify the per	son responsible for the plun	nbing work.	Plumber	Installer 🗍	-lome C
Plumbing Installer:		an a	Office I	hone:	
Address	τ. 	City:		MN License #.	
wechanical Work: Identify the p	erson responsible for the M		iechanicai Contrac	LLOF Home Ow	ner
Mechanical Contractor:	; f	Address :	F		7
City:	Office Phone:		Cell #:	nan a spane for mannes from a sage with for some substances as in some	
I hereby apply for installation app complete, and accurate; the work Minnesota Building Codes, Minne not a permit and work is not to st	proval and I acknowledge performed will be in confe sota Rules Chapter 1350 art withoൾ 참 DQBAMDATP	that: the plan review ormance with the ma , and/or 24 CFR Par pproventionaread	submittals and th nufactured home t 3285 and 3286 WorR will be in ac	he information above 's installation instruct I understand this ap coordance with the ap	is corr ions, plicatio oprove
NAME OF APPLICANT (P	LEASE PRINT)				