



Lakeside



Cavalier Homes™



Park Model Installation Manual

Cavalier / Cavalier Home Builders, LLC

32 Wilson Blvd 100, Addison, AL 35540

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CORPORATE OFFICE
CLAYTON HOME BUILDING GROUP

500 Clayton Road
Post Office Box 9780
Maryville, TN 37804

INSTALLATION MANUAL

PARK MODEL
ANSI A119.5

CAVALIER
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FORWARD

All PARK MODELS manufactured by Cavalier are constructed in compliance with the American National Standards Institute's Park Model regulations (ANSI A119.5).

This installation manual contains specific instructions that must be strictly adhered to in order for the unit to perform properly. Refer also to model specific drawings that may be attached to the back of this manual.

All site installations shall be performed in accordance with the instructions contained in and attached to this manual (unless noted otherwise) and shall comply with local park model regulations and be inspected on site by the local authority having jurisdiction.

These installation procedures must be performed by an experience installer who has carefully read and understands all aspects of the installation instructions.

Check with the local regulatory agency at the location where the park model is to be installed for any other specific requirements.

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PRELIMINARY PREPARATIONS

1. Check with the owner or general contractor for exact location of park model site.
2. Check access to utilities prior to setting park model.
3. The park model site must be graded and sloped properly to prevent water accumulation in the area beneath the unit.

SETTING PARK MODEL

1. Tow unit into desired location over firm footing on park model site.
2. Remove transportation closure material (weather proof covering and close off grid work).
3. Place the first hydraulic jack under the chassis beam just forward of the front axle spring hanger. Allow room for pier support to be placed next to the front spring hanger.
4. Second jack shall be located under the same chassis main beam just behind the rear axle spring hanger.
5. Uniformly lift this side of the unit using both jacks and remove the tires (if desired).
6. Locate first two support piers adjacent to the front and rear axle spring hangers. Adjust initial piers as low as possible for easy leveling. Generally, maintaining proper pitch in the drain lines will be the governing factor.
7. Place an additional support pier no greater than 24" from the front and rear end of the park model.
8. Lift other chassis main beam and remove tires if desired (see steps 3-5).
9. Place piers directly opposite those placed on first "I" beam.
10. Evenly space the remaining piers at the required spacing for chassis supports.
11. Level unit from side to side and front to rear by adjusting pier support heights or shimming.
Level must be checked by use of water level or large carpenter's level, and by observation of passage doors and cabinet door for plumbing fit.
12. Install tie-down straps and anchors where required per page 10.

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UTILITY HOOK-UP

1. Provide final installation of any ship loose waste lines at this time, see drawing S-11 details “E” and “F”.
2. HOOK UP WATER LINE TO SERVICE
 - A. Minimum $\frac{3}{4}$ ” water connection is required.
 - B. A master cold water shut-off valve shall be installed in the water supply line adjacent to the park model.
 - C. To drain water lines, remove cap from drain location, open faucets and apply air pressure until all water is removed from system.
3. HOOK UP GAS LINE SERVICES
 - A. Use a gas supply connector listed and rated according to the label attached to the park model at the gas supply connection.
4. HOOK UP WASTE LINE TO SERVICE
 - A. Minimum 3” waste connection required.
 - B. An approved flexible connector shall be installed at each end of the drain line from the park model to the sewer outlet.
 - C. For shipped loose drain line installation, see drawing S-11 detail “E”.
5. Complete electrical hook up and installation of light fixtures shipped loose for interior and exterior of park model prior to turning on service. **WARNING: DO NOT TURN ON BREAKER TO WATER HEATER UNTIL TANK IS FULL OF WATER.**
6. Complete electrical hook up from park model park to service.
7. After completing all utility hook ups to service, perform the following tests:
 - A. Electrical function test.
 - B. Water pressure test.
 - C. Flood test (plumbing drain system).
 - D. Gas test.
 - E. Appliance function test.

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8. Floor Undersheathing: The sheathing covering the bottom of the park model is a special material that is either vinyl coated or asphalt impregnated to protect against moisture, rodents, and unconditioned air. This sheathing was inspected and intact at the factory, but may have been damaged in transit or during set up.

If a large hole is found and the material is vinyl coated, use a patch of the same material, tacking to the nearest floor joist, and seal the edges with tape to retain air tightness. Small holes may be sealed with tape alone. If the material is asphalt impregnated board, use a patch of the same material with a bead of adhesive around the contact edges to make an air tight seal. Tack to the nearest floor joist, or use divergent staples.

Wrap all P-traps exposed below the floor with insulation, then wrap with bottom board material and tape all seams.

9. Option Heating & Cooling: If heating and/or cooling equipment is not included, the ducts and registers may be installed or will be installed on-site by others. A qualified heating and cooling contractor shall make provisions to provide an approved air return system for the unit in accordance with the manufacturer's instructions. Adequate distance shall be maintained under the park model for the equipment. The external equipment ductwork shall be supported off the ground, providing a one-inch minimum ground clearance and be supported and connected according to the appliance manufacturer's installation instructions. Ductwork shall not be crushed, dented, compressed, have sharp bends, or stress at the connections. All tears, holes, and penetrations in ductwork shall be repaired and sealed. Electrical power wiring must be made in accordance with the current edition of the National Electric Code and all applicable local codes and ordinances.

FINAL CLOSE UP AND INSPECTION

1. Remove detachable (if desired) hitch and store under park model.
2. Install any necessary molding to complete the interior trim.
3. Install carpet and pad in designated areas, when necessary.
4. Check the following during final walk through inspection:
 - A. All drawers and doors for proper alignment and fit.
 - B. Floor tile, counter tops, marble, fiberglass, paneling, exterior finish, and roof for acceptable condition.
 - C. Plumbing and electrical hook ups.

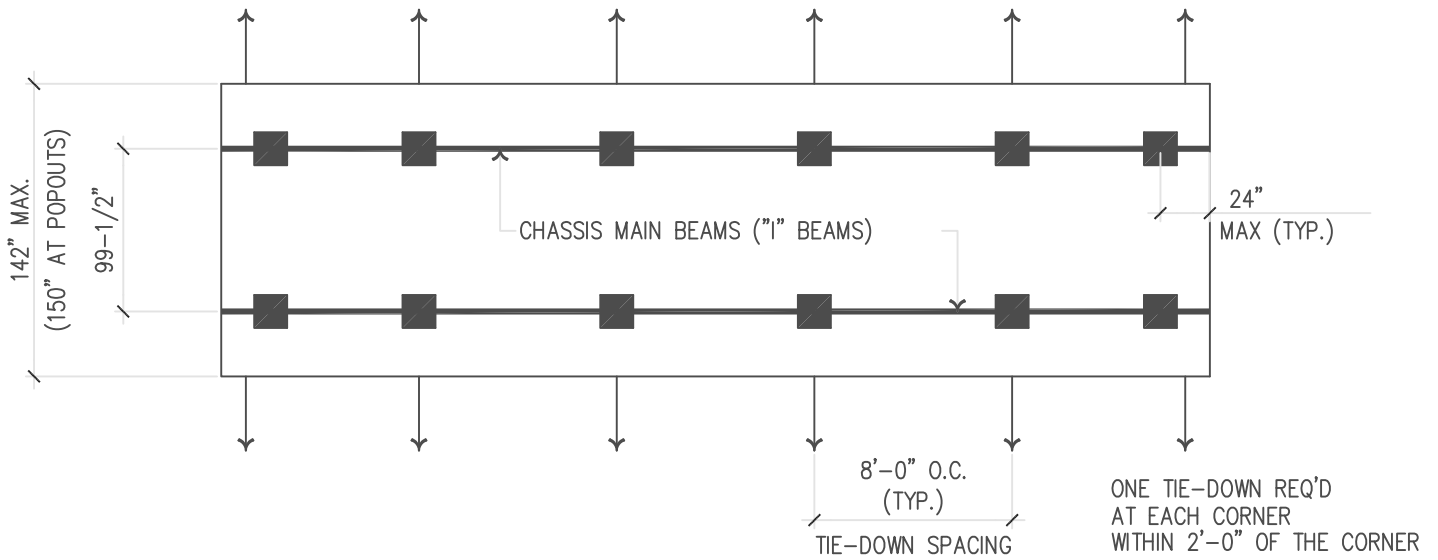
RE-LEVELING

In certain regions, initial proper blocking and leveling of the park model can be gradually impaired due to relatively normal settling of the ground surface upon which the park model is sited. Periodic inspection of the building's blocked and level conditions are necessary to assure proper performance of the park model.

To check whether the park model needs re-leveling, place a carpenter's level upon the floor of the building at several lengthwise and crosswise locations in each room to determine if it is reasonably level throughout. If re-leveling is necessary, corrective measures can be taken by having an experienced installer follow the leveling procedures as previously outlined in this manual.

Before re-leveling, loosen the frame tie-downs and or ground straps prior to jacking up the park model. Re-tighten ground straps after floor is level.

SUPPORT PLAN



■ CHASSIS BEAM PIERS / PADS:

PIER SPACING	PIER CAPACITY	PAD SIZE
4' O.C.	2700#	390
6' O.C.	4000#	576
8' O.C.	5000#	720
10' O.C.	6000#	864

NOTES:

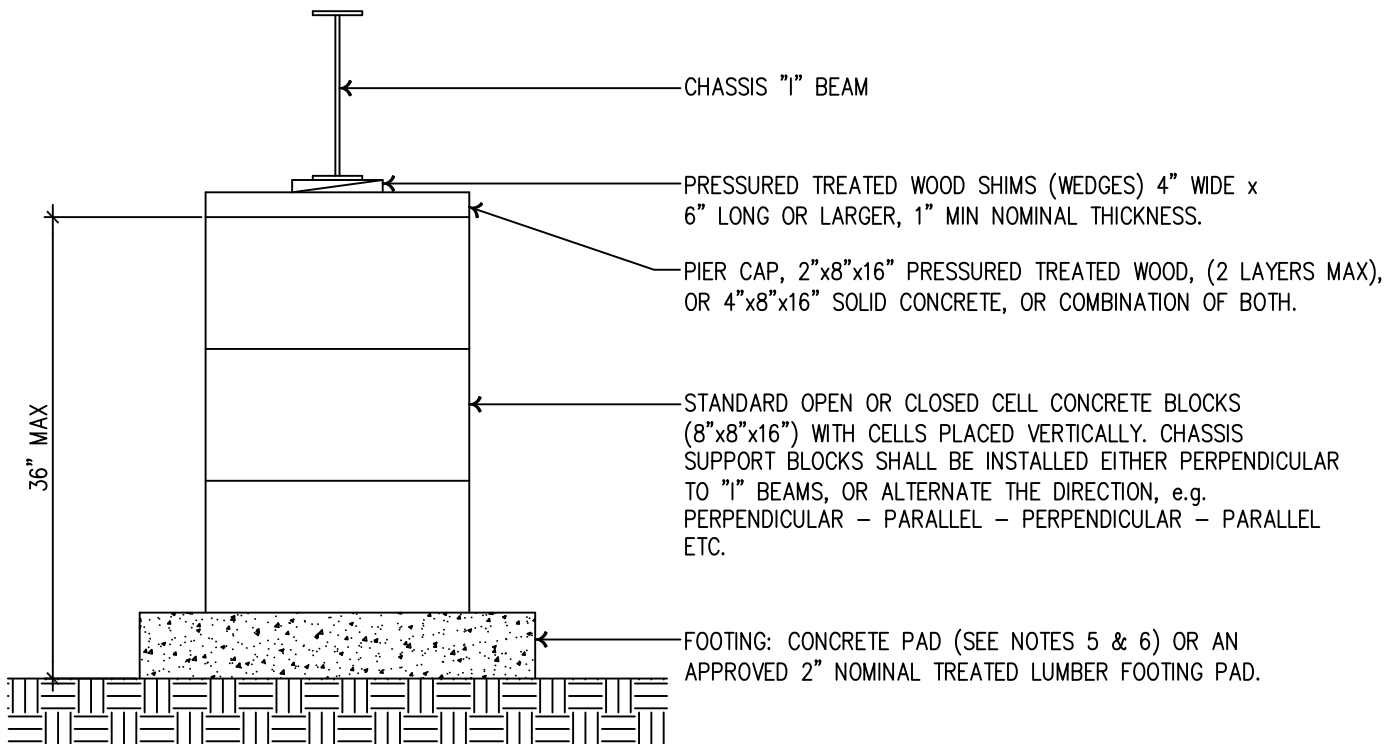
1. ALL PAD SIZES SHOWN IN SQUARE INCHES.
2. ALL REQUIREMENTS ARE MINIMUMS.
3. THE MAXIMUM LENGTH TO WIDTH RATIO FOR PADS IS 2.5:1.
4. FOOTER SIZE ABOVE ASSUMES A MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF 1000 PSF UNDER EACH FOOTER.

PIER & FOOTING SUPPORT CONFIGURATION

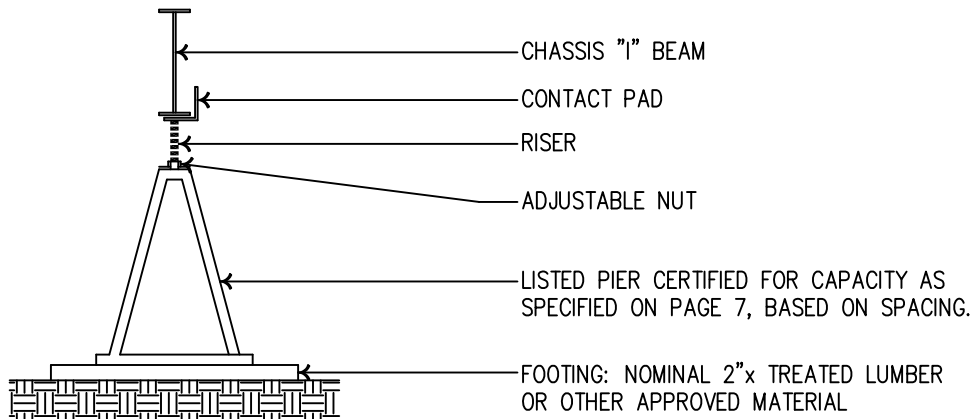
GENERAL NOTES:

1. ALL PIERS AND FOOTINGS SHALL BE APPROVED FOR THEIR INTENDED USE BY THE AUTHORITY HAVING JURISDICTION.
2. A MINIMUM GROUND CLEARANCE OF 12" SHALL BE MAINTAINED BENEATH THE LOWEST MEMBER OF THE CHASSIS ("I" BEAM).
3. THE MAXIMUM LENGTH TO WIDTH RATIO FOR FOOTING PADS SHALL BE 2.5:1.
4. ALL FOOTINGS (PADS OR CONTINUOUS) MAY BE PLACED DIRECTLY ON THE GROUND SURFACE WHERE ALLOWED BY LOCAL JURISDICTION, PROVIDED THAT THE SOIL IS FIRM AND UNDISTURBED OR COMPACTED FILL AND FREE OF GRASS AND ORGANIC MATERIAL.
5. CONCRETE FOOTINGS SHALL BE EITHER 4" PRECAST OR 6" THICK POURED WITH 28 DAY COMPRESSION STRENGTH OF AT LEAST 3,000 PSI.
6. DISTANCE FROM FACE OF PIER TO OUTSIDE EDGE OF FOOTER SHALL NOT EXCEED 7 3/4" FOR CONCRETE FOOTERS.

A. CONCRETE BLOCK PIERS



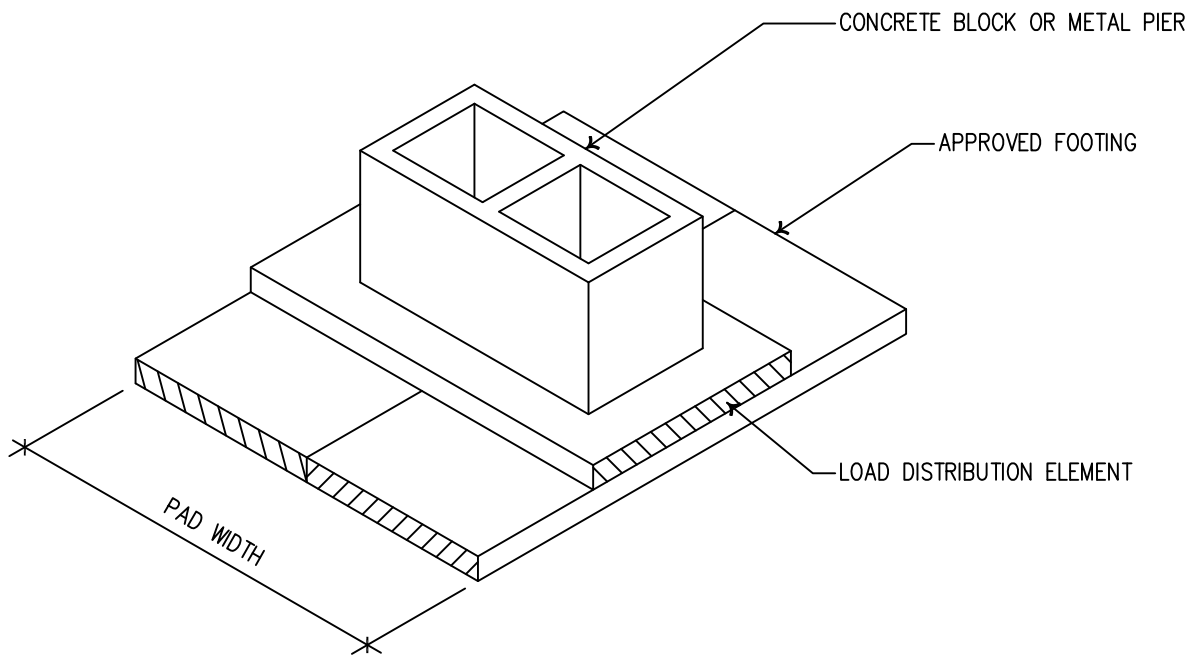
B. METAL PIERS



C. MULTIPLE PIERS / PADS

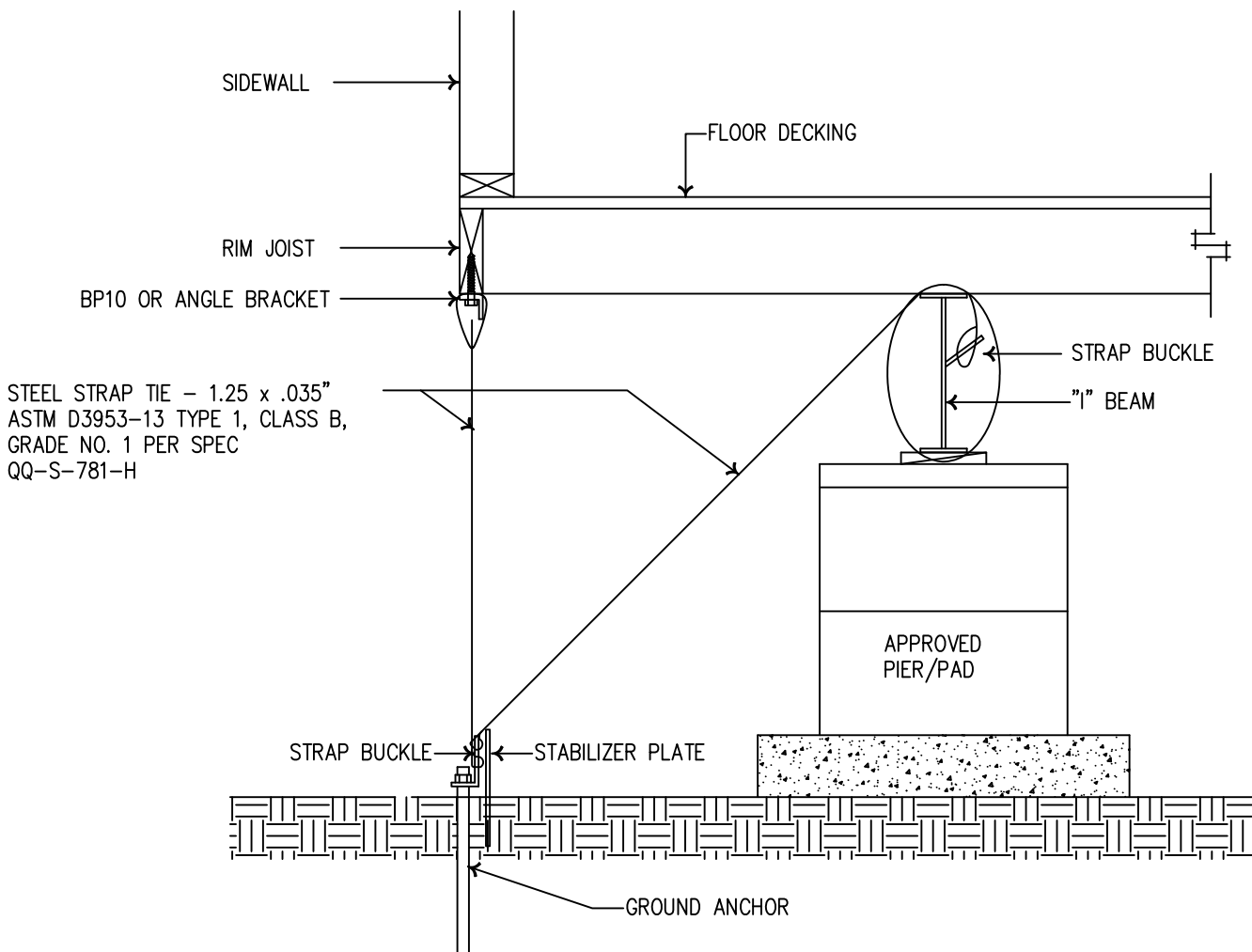
1. SINGLE PIER ON MULTIPLE PAD

A load distribution element is required for piers founded on two or more footing pads when the length of the pier base is less than the width of the multiple pad. The load distributing element shall be approved 2" x treated lumber or other approved material whose width is at least equal to the width of the pier and whose length is at least equal to the width of the multiple pads.



ANCHORS AND TIES

1. EACH APPROVED GROUND ANCHOR AND TIE SHALL BE CAPABLE OF RESISTING AN ALLOWABLE WORKING LOAD OF AT LEAST 3150# IN THE DIRECTION OF THE TIE PLUS A 50% OVERLOAD (4725#) WITHOUT FAILURE.
2. ALL ANCHORING EQUIPMENT SHALL HAVE A RESISTANCE TO WEATHER DETERIORATION AT LEAST EQUIVALENT TO THAT PROVIDED BY A COATING OF 0.30 OUNCES OF ZINC PER SQUARE FOOT OF STEEL.
3. INSTALL GROUND ANCHOR AND TIEDOWN EQUIPMENT IN ACCORDANCE WITH THE ANCHOR MANUFACTURE'S INSTALLATION INSTRUCTIONS.
4. THE TIEDOWN SYSTEM SHOWN BELOW IS ONE ACCEPTABLE METHOD OF ANCHORAGE. OTHER APPROVED SYSTEMS MAY BE USED PROVIDED THAT THEY MEET THE STRENGTH REQUIREMENTS AS STATED IN ITEM 1 ABOVE AND ARE DESIGNED BY A PROFESSIONAL ENGINEER.

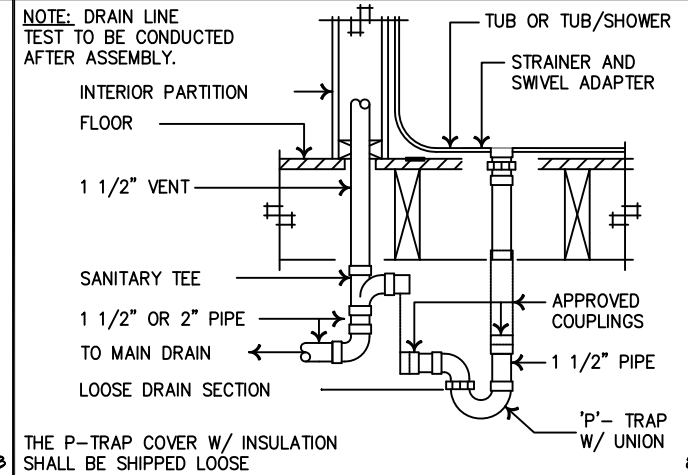
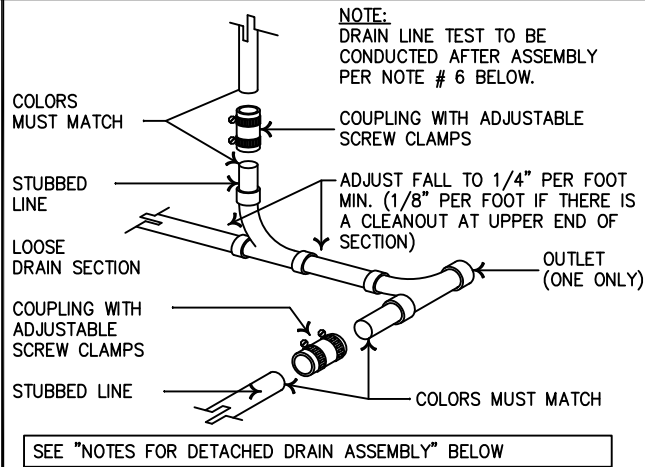


N/A

N/A

N/A

N/A



D TYPICAL DETACHED DRAIN ASSEMBLY

E FIELD INSTALLED 'P - TRAP'

NOTES FOR DETACHED DRAIN ASSEMBLY - DETAIL "E"

1. ABS PLASTIC PIPE FITTINGS AND JOINTS: USE SOLVENT CEMENT SPECIFICALLY MANUFACTURED FOR USE IN ABS PLASTIC PIPE CONNECTIONS. APPLY IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. SOLVENT SHALL COMPLY WITH ASTM D 2235-81 OR NSF-14-1985.
2. ALL JOINTS AND CONNECTIONS SHALL BE CORRECTLY ASSEMBLED FOR TIGHTNESS. PLASTIC PIPE SHALL BE INSERTED TO THE FULL DEPTH OF THE SOCKETS OF EACH FITTING.
3. THE DRAIN OUTLET MUST BE PROVIDED WITH A MINIMUM CLEARANCE OF 3" IN ANY DIRECTION FROM ALL PARTS OF THE STRUCTURE OR APPURTENANCES AND WITH NOT LESS THAN 18" UNRESTRICTED CLEARANCE DIRECTLY IN FRONT OF THE DRAIN OUTLET.
4. CLEANOUTS SHALL BE ACCESSIBLE THROUGH AN UNOBSTRUCTED MINIMUM CLEARANCE OF 12" DIRECTLY IN FRONT OF THE OPENING.
5. SUPPORT DRAIN LINE(S) BY FACTORY INSTALLED PLUMBERS TAPE OR PLASTIC STRAPS AT 48" O/C MAX. WRAP LOOSE END OF STRAP AROUND PIPE AND NAIL TO FLOOR JOIST OR FASTEN TO CHASSIS WITH SELF-TAPPING SCREW. ASSURE PROPER SLOPE (FALL) TOWARD OUTLET OF 1/4" PER FOOT MIN. OR 1/8" MIN. PER FOOT WHERE FACTORY INSTALLED CLEANOUT IS PROVIDED AT UPPER END OF DRAIN LINE.
6. PERFORM DRAIN LINE "FLOOD LEVEL TEST" AFTER ASSEMBLY ACCORDING TO THE FOLLOWING PROCEDURE: THE MANUFACTURED HOME SHALL BE IN A LEVEL POSITION, ALL FIXTURES SHALL BE CONNECTED, AND THE ENTIRE SYSTEM SHALL BE FILLED WITH WATER TO THE RIM OF THE TOILET BOWL. (TUB & SHOWER DRAINS SHALL BE PLUGGED). AFTER ALL TRAPPED AIR HAS BEEN RELEASED, THE TEST SHALL BE SUSTAINED FOR NOT LESS THAN 15 MINUTES WITHOUT EVIDENCE OF LEAKS. THEN THE SYSTEM SHALL BE UNPLUGGED AND EMPTIED. THE WASTE PIPING ABOVE THE LEVEL OF THE TOILET BOWL SHALL THEN BE TESTED AND SHOW NO INDICATION OF LEAKAGE WHEN THE HIGH FIXTURES ARE FILLED WITH WATER & EMPTIED SIMULTANEOUSLY TO OBTAIN THE MAXIMUM POSSIBLE FLOW IN THE DRAIN PIPING.

REVISIONS		
NO.	REVISED BY	DATE
△	-	-

DRAWING **"SET-UP INSTRUCTIONS" PLUMBING**

DRAWN BY J. MONTES DATE 10-15-09 **S-11**

SITE-BUILT ADDITIONS AND PORCHES

A site-built addition or porch may be constructed adjacent to a park model built by Clayton Home Building Group provided the addition meets the following minimum conditions:

1. The addition must be entirely self-supported and cannot rely on the park model for support (superficial connections are acceptable). The park model's structural system is not designed to support the superimposed loads of the addition or porch.
2. The park model's structural system shall not be cut or altered in any way.
3. All joints between the park model and the addition must be properly sealed so they are watertight.
4. The park model's mechanical system has been sized for the park model itself and does not consider the heating or cooling for any type of addition.
5. The addition or porch must meet all local codes and structural requirements. The manufacturer does not accept any responsibility for the design of the addition or porch.
6. The addition or porch must be approved by the jurisdiction having authority.
7. The manufacturer will not honor the warranty for any problem that relates to the construction of the addition or porch (leak problems, etc).
8. A dormer roof may be installed on the park model to match the roof pitch of the addition or porch. The shingles below the dormer must be removed and the dormer must be vented properly. The dormer weight shall be no more than 5 psf and distributed uniformly over the roof trusses of the park model. Connections may be made to attach the dormer to the park model, but not be used to support the roof loads of the addition or porch. The dormer shall be shingled and sealed properly to prevent leaks (follow shingle manufacturer's instructions and ARMA guidelines for shingle valley applications).


Local permits, inspections, warranties, and installation requirements for site-installed additions are not the responsibility of Clayton Home Building Group or its affiliates. Clayton Home Building Group extends no warranties for any site constructed additions.

Sep 28, 2016 - 9:39pm C:\Users\russellb\Desktop\Park Model Manuals\INSTALLATION MANUAL DRAWINGS.dwg

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SITE BUILT STRUCTURES

SCALE: N.T.S.

TITLE: GENERAL INFORMATION		 Home Office 5000 Clayton Road, Maryville, TN 37804 PH: 865.380.3000 FAX: 865.380.3781
DRAWN BY: B.R.	DATE: 9/16/2016	
	LAST REVISED: 9/28/2016	SHEET: G-4