



ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

Legacy report on the 2000 International Building Code®, the 2000 International Residential Code®, the 2002 Accumulative Supplement to the International Codes™, the BOCA® National Building Code/1999, the 1999 Standard Building Code®, the 1997 Uniform Building Code™ and the 1998 International One-and Two-Family Dwelling Code

DIVISION 02 – SITE CONSTRUCTION
Section 02620 – Subdrainage

J-DRain® SWD-6, J-DRain® SWD-12,
J-DRain® 200 Foundation Drainage and
J-DRain 220 Foundation Drainage

JDR ENTERPRISES, INC.
292 S. MAIN STREET, SUITE 200
ALPHARETTA, GA 30004
jdrmtkg@j-drain.com
www.j-drain.com

ADDITIONAL LISTEES:

Nudrain SD-60, Nudrain ED-86, WD-10

Nilex Corporation
15171 E. Fremont Drive
Centennial, CO 80112

Drain-A-Way 6", Drain-A-Way 12" and
Drain-A-Way Type I Foundation Drainage

Mar-Flex Waterproofing
6866 Chrisman Lane
Middletown, OH 45042

AquaDrain 50BD, AquaDrain 100 BD,
AquaDrain 15X and AquaDrain 15XP

Cetco
1500 W. Shure Drive
Arlington Heights, IL 60004

NDS Spee-D® Drain 4'x25' and
NDS Spee-D® Drain 6" x50'

NDS
851 N. Harvard Ave.
Lindsay, CA 93247

Drain All 6" - 6"x150', Drain All 12" - 12"x150' and
Drain All 200 - 4'x50'

Rubber Polymer Corporation
1135 W. Portage Trail Ext.
Akron, OH 44313-8283

Frame-a-Drain SWD 7 1/4" x 150' and Frame-a-Drain 200

LeBlanc, Mfg., LLC
PO Box 73
Linden, MI 48451

Dura-Drain 6", Dura-Drain 12" and Dura-Drain 200

NuDura Corporation
80 Ellis Drive Unit 1
Barrie, Ontario L4M 6E7
Canada

Drain Guard 200, Drain Guard 6" and Drain Guard 12"

Applied Technologies, LLC
PO Box 18476
Fairfield, OH 45018

1.0 SUBJECT

- 1.1 J-DRain® SWD-6
1.2 J-DRain® SWD-12
1.3 J-DRain® 200 FOUNDATION DRAINAGE
1.4 J-DRain® 220 FOUNDATION DRAINAGE

2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT

- 2.1 Foundation Drainage System

3.0 DESCRIPTION

J-DRain® SWD-6 and J-DRain® SWD-12 are modular composite foundation drainage and collection systems intended for use as alternatives to conventional pipe and gravel drainage systems around building foundations. J-DRain® SWD-6 and J-DRain® SWD-12 consist of a three-dimensional, high flow, dimpled drainage core wrapped with a nonwoven filter fabric. The fabric is intended to retain soil particles while allowing filtered water to pass into the entire cross section of the drainage core for collection and removal. J-DRain® SWD-6 is a flexible black roll, 6 in. wide by 150 ft.

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(152 mm by 46 m) long. J-DRain® SWD-12 is a flexible black roll, 12 in. wide by 150 ft. (304 mm by 46 m) long. End outlet fittings and corner outlet fittings are available to make the transition from J-DRain® SWD-6 and J-DRain® SWD-12 to a 4 in. (102 mm) plastic pipe to convey collected water to a drainage disposal system. Side outlet fittings are available to make in-line transitions from J-DRain® SWD-6 and J-DRain® SWD-12 to a 4 in. (102 mm) pipe for intermediate collection of water along the footing or to convey the collected water through the footing to an inside sump. Step-down fittings are available for vertical stepped foundations. Corners, corner-outlets, end caps and splices are also available as optional accessories. See Figure 1 of this report for an illustration of the components used with J-DRain® SWD-6 and J-DRain® SWD-12 systems. Optional components of the system are Chimneys (See Figure 2). Chimneys are cut to length sections of J-DRain® SWD-6 and J-DRain® SWD-12. Although chimneys are an optional part of the Modular Drainage System, their purpose is to draw the ground water which migrates through the soil adjacent to the wall and quickly convey the water down to the base collection system.

J-DRain® 200 is a prefabricated drainage composite sheet used to provide drainage on foundation walls and under concrete slabs. J-DRain® 200 is intended to be used on foundation walls to provide for water collection in conjunction with a collection system such as J-DRain® SWD-6, J-DRain® SWD-12 or a pipe and gravel collection system. J-DRain® 200 consists of a light-duty, impermeable polymeric sheet formed under heat and pressure to form a high-flow dimpled drainage core bonded to a nonwoven filter fabric on the dimpled side. The fabric is intended to retain soil or sand particles while allowing filtered water to pass into the drainage core. J-DRain® 200 is available in flexible rolls 4 ft. wide by 50 ft. (1.22 m by 15.24 m) long. See Figure 3, Figure 4 and Figure 5 of this report for an illustration of J-DRain® 200 system.

J-DRain® 220 is a prefabricated drainage composite sheet used to provide drainage on foundation walls and under concrete slabs. J-DRain® 220 is intended to be used as an alternative to J-DRain® 200 in conjunction with a collection system such as J-DRain® SWD-6, J-DRain® SWD-12 or a pipe and gravel collection system. J-DRain® 220 is compatible with waterproofing and damproofing systems and protects the systems without the use of a protection board. J-DRain® 220 consist of a light-duty, impermeable polymeric sheet which is formed under heat and pressure to form a dimpled core. A protection sheet bonded to the back side of the dimpled core is added to provide protection for soft membrane waterproofing systems. The dimpled drainage core is bonded to a nonwoven filter fabric on the dimpled side. The fabric is intended to retain soil or sand particles while allowing filtered water to pass into the drainage core. J-DRain® 220 is available in flexible rolls 4 ft. wide by 50 ft. (1.22 m by 15.24 m) long. See Figure 3, Figure 4 and Figure 5 of this report for an illustration of J-DRain® 220 system.

4.0 INSTALLATION

J-DRain® SWD-6 and J-DRain® SWD-12 foundation drainage systems are installed on the exterior of below-grade foundation walls and retaining walls to provide perimeter drainage. Waterproofing or damproofing shall be applied to the foundation or retaining wall in accordance with the requirements of the applicable Code, prior to installation of the J-Drain products. The J-DRain® SWD drainage material is unrolled along the base of the foundation and secured with mastic, adhesive, or mechanical fasteners. An end fitting 6-4 End Out Fitting is installed to the end of the J-DRain® and a 4 inch (102 mm) pipe is attached for removal to daylight or sump. J-DRain® 200 and J-DRain® 220 are used when additional drainage protection is desired. They are installed

from the base of the footing upward to within 6 inches (152.4 mm) below the top of the backfill and provide for full coverage of the foundation wall. J-DRain® 200 and J-DRain® 220 are installed with mastic or mechanical fasteners and must be used in conjunction with a collection system such as J-DRain® SWD-6 or J-DRain® SWD-12. See Figure 3 and Figure 4. J-DRain® 200 and J-DRain® 220 are installed prior to the collection system. After the installation of the collection system the foundation wall is backfilled.

5.0 IDENTIFICATION

All of the components of J-DRain® SWD-6, J-DRain® SWD-12, J-DRain® 200 and J-DRain® 220 Foundation Drainage Systems, or their packaging, as described in this report shall be identified by a label bearing the manufacturer's name, model number, and this evaluation report number, NER-636.

6.0 EVIDENCE SUBMITTED

GeoSyntec Consultants, Inc., Report No. GG0926, dated August 5, 1999, containing results of flow rate and compressive strength testing of J-DRain® SWD-6 .

GeoSyntec Consultants, Inc., Report No. FLQ50509, dated October 9, 1998, containing results of water flow testing of J-DRain® 200.

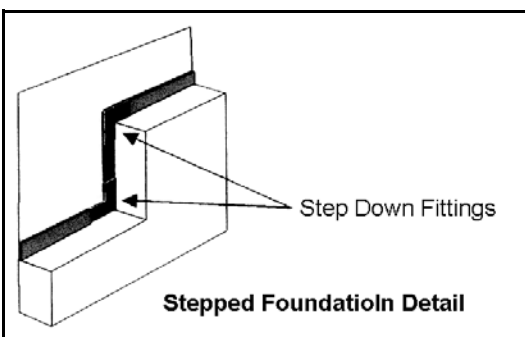
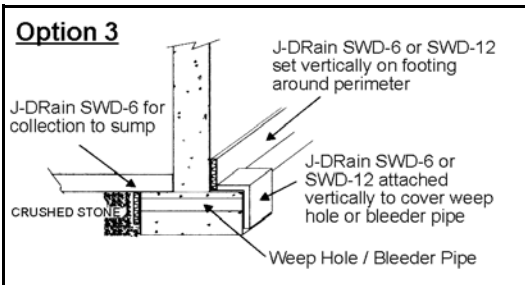
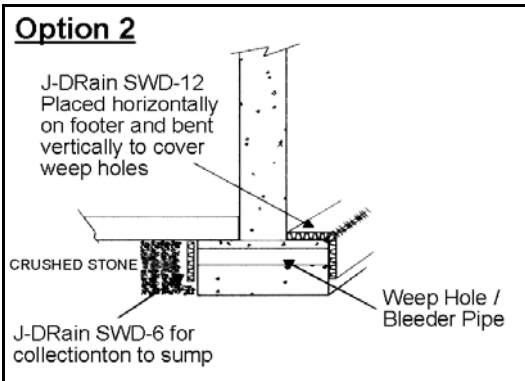
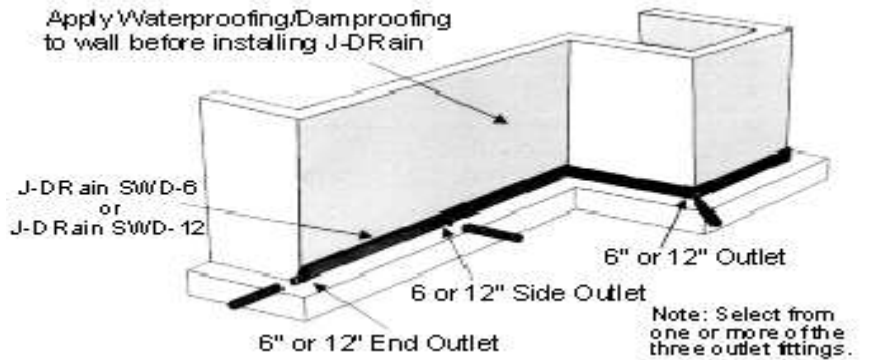
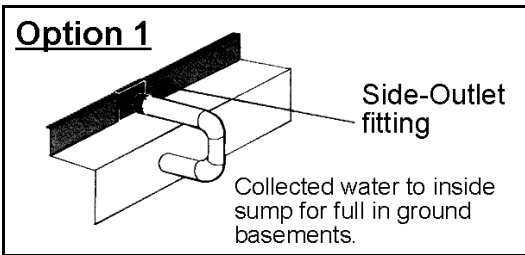
7.0 CONDITIONS OF USE

The ICC-ES Subcommittee for National Evaluation Service finds that J-DRain® SWD-6, J-DRain® SWD-12, J-DRain® 200 Foundation Drainage and J-DRain® 220 Foundation Drainage as described in this report complies with or are suitable alternates to that specified in the 2000 *International Building Code*®, the 2000 *International Residential Code*®, with the 2002 *Accumulative Supplement to the International Codes*™, the BOCA® *National Building Code/1999*, the 1999 *Standard Building Code*®, the 1997 *Uniform Building Code*™ and the 1998 *International One-and Two-Family Dwelling Code* subject to the following conditions:

- 7.1 This evaluation report and the manufacturer's published installation instructions, when required by code official, shall be submitted at the time of permit application.
- 7.2 J-DRain® 200 and J-DRain® 220 shall be limited to use on foundation walls less than 20 ft. (6.10 m) high to provide for water collection which is transmitted to a J-DRain® SWD-6, J-DRain® SWD-12 or pipe and gravel collection system.
- 7.3 J-DRain® 200 and J-DRain® 220 Foundation Drainage Systems shall not be used as an alternative to the foundation drain prescribed in the applicable Code.
- 7.4 J-DRain® 200 and J-DRain® 220 Foundation Drainage Systems shall be installed with the filter fabric facing the compacted soil or fill material.
- 7.5 J-DRain® SWD-6 and J-DRain® SWD-12 shall be installed continuously at the base of the foundation wall, wrapped around the perimeter of the foundation below grade in the same manner as the foundation drain complying with the applicable Code.
- 7.6 J-DRain® SWD-6 and J-DRain® SWD-12 shall be installed in a vertical position and held in place with adhesive, mastic or mechanical fasteners.
- 7.7 J-DRain® SWD-6 and J-DRain® SWD-12 shall be installed after installation of the foundation waterproofing.
- 7.8 This report is subject to periodic re-examination. For information on the current status of this report, contact the ICC-ES.

J-DRain® SWD-6 & SWD-12

Weeped or Bleed Pipe Footings

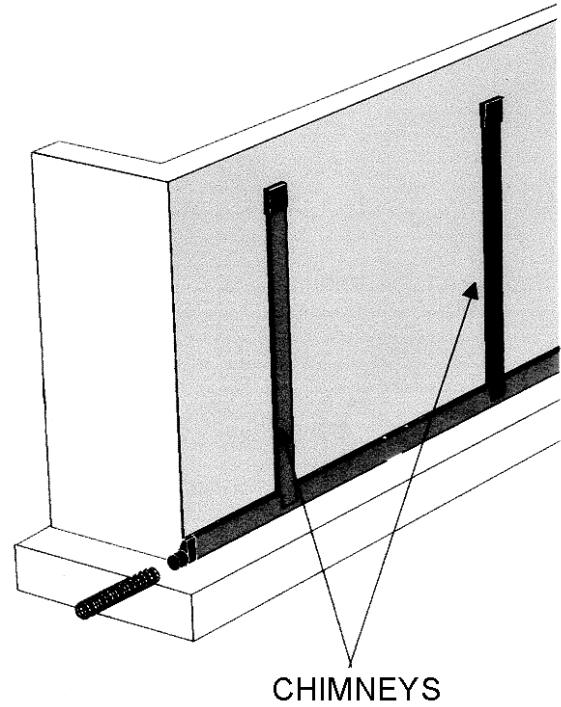


FITTING SCHEDULE	
 Side View End View	<p>6" & 12" End Outlet are used to make transitions from J-DRain to a corrugated 4" plastic pipe for moving the collected water to sump or daylight.</p>
 End View Side View	<p>6" & 12" Side-Outlets are used to make in line transition from J-DRain for intermediate collection of water along footing.</p>
 Side View Top View	<p>6" & 12" Corner Outlet are used to make corner transition from J-DRain SWD at an outside corner to a 4" corrugated pipe to sump or daylight.</p>
 End View Side View	<p>6-0 End Cap is used to cover the cut end of J-DRain in SWD-6 at either vertical or horizontal terminations.</p>
 End View Side View	<p>6" & 12" Splices are used to connect two strips of J-DRain SWD either vertically or horizontally.</p>
 Side View Top View	<p>6" & 12" Corners are used to connect two strips of J-DRain SW on an inside or outside corner.</p>
 Side View	<p>6x6 Step-Down is used to connect two strips of J-DRain SWD-6 on a vertical stepped foundation.</p>

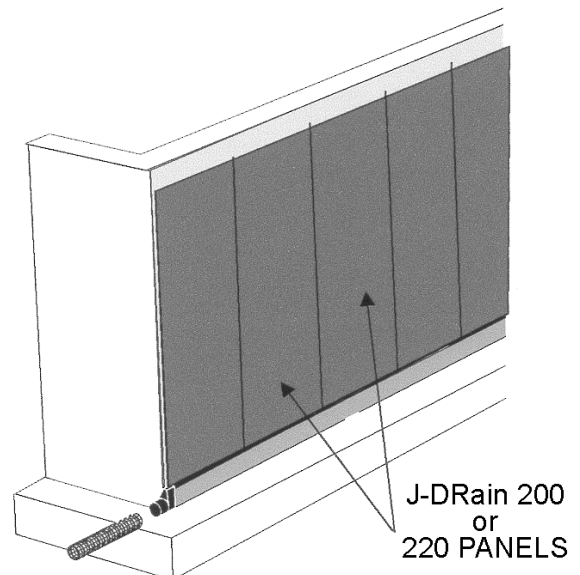
Figure 1*
ADDITIONAL DRAINAGE OPTIONS

OPTION 1.**J-DRain® SWD-6 & SWD-12**

Vertical chimneys are installed as shown in this diagram. Chimneys are installed every 4' to 8' on center and extend up the wall from the base collection system to within 6" of the top of backfill. Chimneys are typically installed on inside corners and under window wells.

**Figure 2*****OPTION 2.****J-DRain® 200 & 220**

J-DRain 200 or J-DRain 220 panels are installed by cutting to length from the footing to within 6" from the top of backfill and fastened to the wall with adhesives or mechanical fasteners. Panels are placed side by side around the building foundation. A water collection system such as J-DRain SWD-6 or J-DRain SWD-12 is then installed at the footing for the collection and removal of water.

**Figure 3***

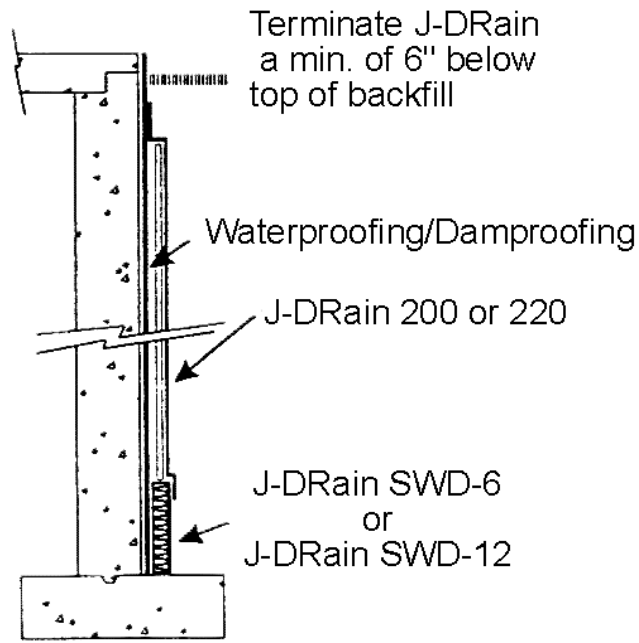


Figure 4*

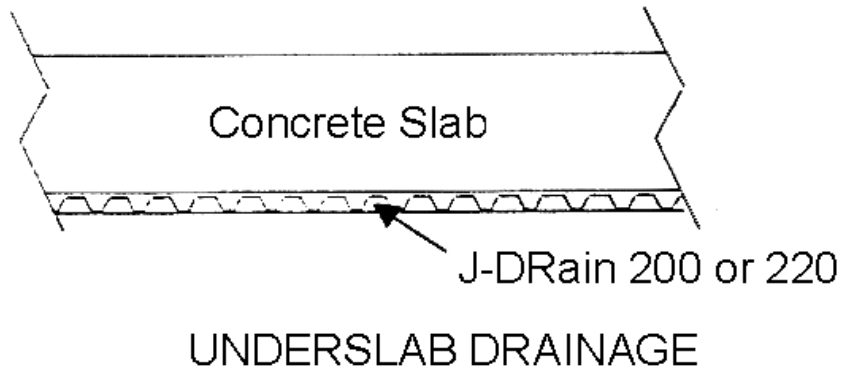


Figure 5*

A method of installation where the drainage media is installed on the interior of the footing forms prior to placement of concrete. Drainage media is left in place after concrete is placed in forms and forms are removed. After soil backfill, collected water from drainage media is taken away by bleed pipes to inside sump. (See Figure 1).

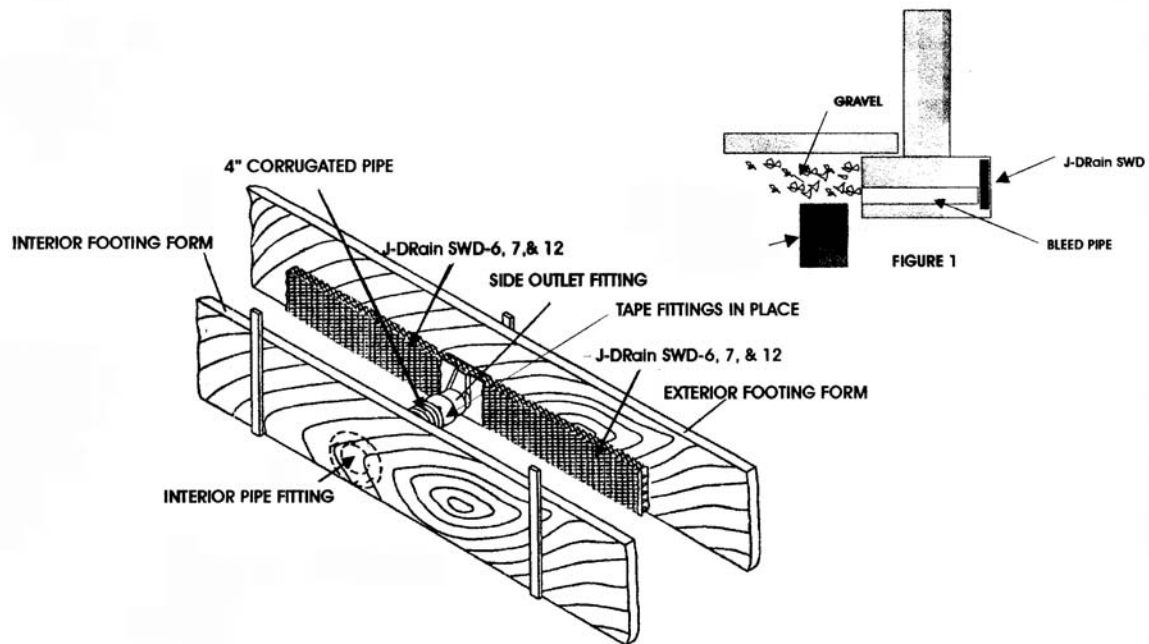


Figure 6*

*THESE DRAWINGS ARE FOR ILLUSTRATION PURPOSES ONLY. THEY ARE NOT INTENDED FOR USE AS CONSTRUCTION DOCUMENTS FOR THE PURPOSE OF DESIGN, FABRICATION OR ERECTION.