Community Development Department
102206 E. Wiser Parkway
Kennewick, WA 99338
building.department@co.benton.wa.us

Building Division
Brad O'Brien
Building Manager

BENTON COUNTY FIRE MARSHAL

ADULT FAMILY HOME

An Adult Family Home classified as a Group R Division 3 occupancy means a dwelling in which a person or persons provide personal care, special care, or room and board to more than one but not more than six adults who are not related by blood or marriage to the person or persons providing the services.

- **Where to obtain a building permit?**
- The Benton County Building Division, 102206 E Wiser Parkway Kennewick WA, 99338 Monday -Friday, 8:00 to 12:00 and 1:00-5:00 (except holidays).

- **What items are required before a building permit application may be submitted?**
- May require Special Use Permit approval if required, Contact the Benton County Planning Division for further information.
- May Require SEPA Review may be required completed per WAC 197-11-800 (1)(b)(iii), Contact Benton County Planning Division for further information.
- Should the total number of bedrooms be increased contact the Benton Franklin Health Department at 460-4205.

Please include the following information with the other application requirements.

The plans submitted shall include a floor plan indicating the sleeping room type as well as the means of egress system and comply with IRC section 330.

The plans shall indicate the location of the smoke detectors. Smoke detectors shall be audible in all parts of the dwelling when any single alarm sounds.

All sleeping room and bathroom doors shall be openable from the outside when locked; all closet doors shall be openable from the inside.

All sleeping rooms shall have a code compliant escape window per IRC Section 310 and Section 325.6.

You may contact the Benton County Building Division in Kennewick at 509-735-3500.

Adult Family Homes R330.1
General Requirements

WAC 51-51-0330 Section R330
Adult family homes. R330.1 General. This section shall apply to all newly constructed adult family homes and all existing single-family homes being converted to adult family homes. This section shall not apply to those adult family homes licensed by the state of Washington department of social and health services prior to July 1, 2001.

R330.2 Reserved.

R330.3 Sleeping room classification. Each sleeping room in an adult family home shall be classified as:
1. Type S - Where the means of egress contains stairs, elevators, or platform lifts.
2. Type NS1 - Where one means of egress is at grade level or a ramp constructed in accordance with R330.9 is provided.
3. Type NS2 - Where two means of egress are at grade level or ramps constructed in accordance with R330.9 are provided.

R330.4 Types of locking devices and door activation. All bedroom and bathroom doors shall be openable from the outside when locked. Every closet shall be readily openable from the inside. Operable parts of door handles, pulls, latches, locks, and other devices installed in adult family homes shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. Pocket doors shall have graspable hardware available when in the closed or open position. The force required to activate operable parts shall be 5.0 pounds (22.2 N) maximum. Required exit doors shall have no additional locking devices. Required exit door hardware shall unlock inside and outside mechanisms when exiting the building allowing reentry into the adult family home without the use of a key, tool or special knowledge.

R330.5 Smoke and carbon monoxide alarm requirements. All adult family homes shall be equipped with smoke and carbon monoxide alarms installed as required in Sections R314 and R315.1. Alarms shall be installed in such a manner so that the detection device warning is audible from all areas of the dwelling upon activation of a single alarm.

R330.6 Escape windows and doors. Every sleeping room shall be provided with emergency escape and rescue windows as required by Section R310. No alternatives to the sill height such as steps, raised platforms or other devices placed by the openings will be approved as meeting this requirement.

R330.7 Fire apparatus access roads and water supply for fire protection. Adult family homes shall be served by fire apparatus access roads and water supplies meeting the requirements of the local jurisdiction.

R330.8 Grab bar general requirements. Where facilities are designated for use by adult family home clients, grab bars for water closets, bathtubs, and shower stalls shall be installed according to this section.

R330.8.1 Grab bar cross section. Grab bars with a circular cross section shall have an outside diameter of 1 1/4 inch minimum and 2 inches maximum. Grab bars with noncircular cross section shall have a cross section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4 5/8 inches maximum. Certified on 7/9/2020 WAC 51-51-0330 Page 1

R330.8.2 Grab bar installation. Grab bars shall have a spacing of 1 1/2 inch between the wall and the bar. Projecting objects, control valves and bathtub or shower stall enclosure features above, below and at the ends of the grab bar shall have a clear space of 1 1/2 inch to the grab bar.

EXCEPTION: Swing-up grab bars shall not be required to meet the 1 1/2-inch spacing requirement. Grab bars shall have a structural strength of 250 pounds applied at any point on the grab bar, fastener, mounting device or supporting structural member. Grab bars shall not be supported directly by any residential grade fiberglass bathing or showering unit. Acrylic bars found in bathing units shall be removed. Fixed position grab bars, when mounted, shall not rotate, spin or move and have a graspable surface finish.

R330.8.3 Grab bars at water closets. Water closets shall have grab bars mounted on both sides. Grab bars can be a combination of fixed position and swing-up bars. Grab bars shall meet the requirements of Section R330.8. Grab bars shall mount between 33 inches and 36 inches above floor grade. Centerline distance between grab bars, regardless of type used, shall be between 25 inches minimum and 30 inches maximum.

R330.8.3.1 Fixed position grab bars. Fixed position grab bars shall be a minimum of 36 inches in length and start 12 inches from the rear wall. R330.8.3.2 Swing-up grab bars. Swing-up grab bars shall be a minimum of 28 inches in length from the rear wall. R330.8.4 Grab bars at bathtubs. Horizontal and vertical grab bars shall meet the requirements of Section R330.8.

R330.8.4.1 Vertical grab bars. Vertical grab bars shall be a minimum of 18 inches long and installed at the control end wall and head end wall. Grab bars shall mount within 4 inches of the exterior of the bathtub edge or within 4 inches within the bathtub. The bottom end of the bar shall start between 36 inches and 42 inches above floor grade.
EXCEPTION: The required vertical grab bar can be substituted with a floor to ceiling grab bar meeting the requirements of Section R325.8 at the control end and head end entry points.

R330.8.4.2 Horizontal grab bars. Horizontal grab bars shall be provided at the control end, head end, and the back wall within the bathtub area. Grab bars shall be mounted between 33 inches and 36 inches above floor grade. Control end and head end grab bars shall be 24 inches minimum in length. Back wall grab bar shall be 36 inches minimum in length.

R330.8.5 Grab bars at shower stalls. Where shower stalls are provided to meet the requirements for bathing facilities, grab bars shall meet the requirements of Section R330.8. **EXCEPTION:** Shower stalls with permanent built-in seats are not required to have vertical or horizontal grab bars at the seat end wall. A vertical floor to ceiling grab bar shall be installed within 4 inches of the exterior of the shower aligned with the nose of the built-in seat.

R330.8.5.1 Vertical grab bars. Vertical grab bars shall be 18 inches minimum in length and installed at the control end wall and head end wall. Vertical bars shall be mounted within 4 inches of the exterior of the shower stall or within 4 inches inside the shower stall. The bottom end of vertical bars mount between 36 inches and 42 inches above floor grade. Certified on 7/9/2020 WAC 51-51-0330 Page 2

R330.8.5.2 Horizontal grab bars. Horizontal grab bars shall be installed on all sides of the shower stall mounted between 33 inches and 36 inches above the floor grade. Horizontal grab bars shall be a maximum of 6 inches from adjacent walls. Horizontal grab bars shall not interfere with shower control valves.

R330.9 Ramps. All interior and exterior ramps, when provided, shall be constructed in accordance with Section R311.8 with a maximum slope of 1 vertical to 12 horizontals. The exception to Section R311.8.1 is not allowed for adult family homes. Handrails shall be installed in accordance with Section R330.9.1.

R330.9.1 Handrails for ramps. Handrails shall be installed on both sides of ramps between the slope of 1 vertical to 12 horizontal and 1 vertical and 20 horizontals in accordance with Sections R311.8.3.1 through R311.8.3.3.

R330.10 Stair treads and risers. Stair treads and risers shall be constructed in accordance with Section R311.7.5. Handrails shall be installed in accordance with Section R330.10.1. R330.10.1 Handrails for treads and risers. Handrails shall be installed on both sides of treads and risers numbering from one riser to multiple risers. Handrails shall be installed in accordance with Sections R311.7.8.1 through R311.7.8.4.

R330.11 Shower stalls. Where provided to meet the requirements for bathing facilities, the minimum size of shower stalls for an adult family home shall be 30 inches deep by 48 inches long. [Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 20-03-023, § 51-51-0330, filed 1/6/20, effective 7/1/20.]

WAC 51-51-03100 Section 310—Emergency escape and rescue openings.

R310.1 Emergency escape and rescue opening required. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court providing an unobstructed path with a width of not less than 36 inches (914 mm) that opens to a public way.

EXCEPTIONS:
1. Storm shelters and basements used only to house mechanical equipment not exceeding a total floor area of 200 square feet (18.58 m).
2. Where the dwelling unit or townhouse unit is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms in basements shall not be required to

have emergency escape and rescue openings provided that the basement has one of the following:
2.1. One means of egress complying with Section R311 and one emergency escape and rescue opening.
2.2. Two means of egress complying with Section R311.

R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools, or special knowledge. Window opening control devices on windows serving as a required emergency escape and rescue opening shall be not more than 70 inches (177.8 cm) above the finished floor and shall comply with ASTM F2090.

R310.2.4 Emergency escape and rescue openings under decks and porches. Emergency escape and rescue openings installed under decks and porches shall be fully openable and provided with an unobstructed pathway of not less than 36 inches (914 mm) in height, 36 inches (914 mm) in width, and no greater than 60 inches (1524 mm) in length that opens to a yard or court. The pathway shall be measured from the exterior face of the glazed opening, or if the glazed opening is in a window well, at the window well wall furthest from the exterior face of the glazed opening.

BENTON COUNTY BUILDING PERMIT APPLICATION

102206 E. WISER PARKWAY, KENNEWICK, WA 99338 / PHONE (509)735-3500 APPLICATION #

Please complete in full and legibly. Incomplete information may slow down the review process.

BUILDING OWNER_____ **PHONE (HM)**_____

MAILING ADDRESS_____ **PHONE (WK)**_____

LEGAL PROPERTY OWNER_____ **PHONE**_____

MAILING ADDRESS_____ **CITY**_____

TAX PARCEL NUMBER 1-___ ___ ___ ___ **-** ___ ___ ___ **-** ___ ___ ___ ___ **-** ___ ___ ___

CONTACT PERSON_____ **PHONE** _____

EMAIL (Legible)_____

PROJECT LOCATION:_____ **CITY**_____ **ZIP CODE:**_____

CONTRACTOR_____**MAILING ADDRESS**_____

PHONE_____ **L&I LICENSE #**__ __ __ __ __ __ __ __ __ __ __ __ **EXP. DATE** __ __ **/** __ __ **/**__ __

LENDING FIRM_____ **PHONE**_____

MAILING ADDRESS_____

BUILDING USE: RESIDENTIAL _____ **AGRICULTURAL (USE)** _____ **COMMERCIAL** _____

CLASS OF WORK: [ ] NEW [ ] ADDITION [ ] REPAIR [ ] MOVE [ ] DEMO [ ] OTHER

SPECIFIC USE OF BUILDING:_____

DESCRIPTION OF PROJECT:_____

VALUATION OF WORK:_____ **LOT SIZE:**_____

SQUARE FOOTAGE: MAIN FLOOR:_____ UPPER FLOOR:_____ GARAGE:_____

BASEMENT:_____ HEATED: [ ] YES [ ] NO OTHER:_____

NUMBER OF: STORIES_____ BEDROOMS_____ BATHROOMS_____

IS AN ADDRESS POST ON SITE? [ ] YES [ ]NO

WITHIN 50' OF POWER LINE? [ ] YES [ ] NO

PLUMBING (NEW ONLY)

QTY.	TYPE OF FIXTURE OR ITEM	QTY.	TYPE OF FIXTURE OR ITEM
	WATER CLOSET (TOILET)		HOSE BIBBS (2 MIN)
	SHOWER		WATER HEATER
	BATHTUB		FLOOR DRAIN OR FLOOR SINK
	SINK OR WASH BASIN		CLOTHES WASHER
	KITCHEN SINK & DISPOSAL		LAUNDRY TRAY/SINK
	DISHWASHER		OTHER

MECHANICAL (NEW ONLY)

QTY.	TYPE OF FIXTURE OR ITEM	QTY.	TYPE OF FIXTURE OR ITEM
	HEATER-FURNACE		GAS FIXTURES
	EXHAUST FAN		PROPANE TANK
	DRYER		FIREPLACE(S)

I hereby certify that I have read and examined this application to 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. All structures located within a floodplain are subject to the requirements of Chapter BCC 3.26 of Benton County Code, including certification by a Washington State Registered surveyor and/or Engineer as it may be required.

SIGNATURE:_____

PRINT NAME: **DATE:**

** An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing**

ADULT FAMILY HOME (AFH) LOCAL BUILDING INSPECTION CHECKLIST

Code References: 2012 IRC
Section R330 (WAC 51-51)

APPLICATION NUMBER:_____

SECTIONS 1. 2. 3. AND 4 MUST BE COMPLETED BY APPLICANT BEFORE INSPECTION WILL BE PROCESSED

SECTION 1- PROPERTY INFORMATION

SITE ADDRESS: _____ ASSESSOR'S TAX/PARCEL#_____

SECTION 2-APPLICANT INFORMATION

PROPERTY OWNER NAME:_____

AFH LICENSEE NAME (IF DIFFERENT):_____DAYTIME PHONE:_____

SECTION 3 - FLOOR PLAN

On a separate sheet of paper (8 ½ x 11) draw a floor plan (including all floors) of your prospective AFH. Include all sleeping rooms (bedrooms) indicating which bedroom is: A, B, C D, E and F.

Label all components for exiting i.e., stairs, ramps, platforms, lifts and elevators.

SECTION 4-DISCLAIMER/SIGNATURE BLOCK

I certify under penalty of perjury that the information furnished by me is true and correct to the best of my knowledge, and that I am requesting or I am authorized by the owner of the above premises to request inspection for the operation of an Adult Family Home at this location. I agree to hold harmless the jurisdiction conducting such inspections, at my request, as to any claim (including costs, expenses, and attorneys' fees incurred in the investigation of such claim), which may be made by any person, including the undersigned, and filed against the jurisdiction, but only where such claim arises out of the reliance of the jurisdiction, including its officers and employees, upon the accuracy of the information supplied to the jurisdiction as a part of this application.

NAME/TITLE: _____

□ **PROPERTY OWNER** □ **APPLICANT** □ **LICENSEE**

DATE:_____

SECTION 5 ***MUST*** BE COMPLETED BY THE BUILDING DEPARTMENT IN THE JURISDICTION THE HOME WILL BE LOCATED.
PLEASE CHECK ALL APPLICABLE BOXES; MATCH THE LIST BELOW TO THE APPLICANT'S FLOOR PLAN – USING THEIR PROSPECTIVE RESIDENT BEDROOM DESIGNATIONS OF ***A B C D E*** AND ***F*** AND CLASSIFICATION CODE **S, NS1 OR NS2**.
*Please make copies of this bedroom page if the home has more than six resident bedrooms to be inspected.

SECTION 5 – BUILDING INSPECTOR'S INSPECTION CHECKLIST

R330.3 Sleeping Room Classification: Each sleeping room in an Adult family Home shall be classified as:

Type S – where the means of egress contains stairs, elevators or platform lifts to evacuate residents to public area.

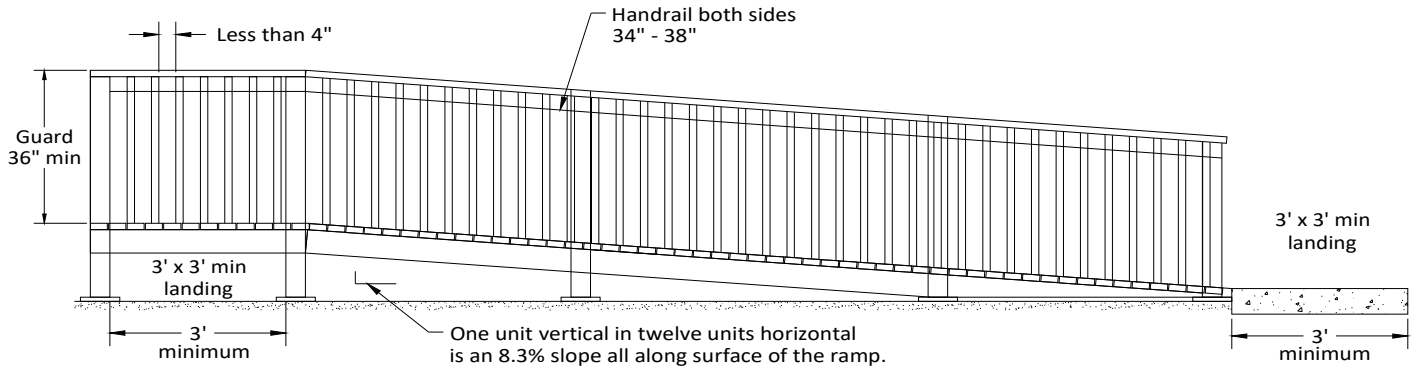
Type NS1 – where 1 means of egress at grade level (has no stairs) or ramp constructed compliant with R330.9 is provided to evacuate residents to public area.

Type NS2 – where 2 means of egress at grade level (both have no stairs) or ramps constructed compliant with R330.9 are provided to evacuate residents to public area.

SLEEPING ROOM A	☐ **Type S**	☐ **Type NS1**	☐ **Type NS2**	**YES**	**NO**
Closet door/s are readily openable from the inside ☐ **Yes** ☐ **No** ☐ **N/A**		Smoke alarm is installed in the bedroom		☐	☐
Bedroom door opens easily and quickly from the outside when locked				☐	☐
Sleeping room window has a net opening of 5.7 SF (minimum dimensions at least 24"high; at least 20" wide) **EXCEPT** per R310.2.1: at-grade escape windows – may have net clearance opening 5 SF				☐	☐
Sleeping room window has a maximum sill height of 44" above floor to clear opening; no steps under window allowed				☐	☐
SLEEPING ROOM B	☐ **Type S**	☐ **Type NS1**	☐ **Type NS2**	**YES**	**NO**
Closet door/s are readily openable from the inside ☐ **Yes** ☐ **No** ☐ **N/A**		Smoke alarm is installed in the bedroom		☐	☐
Bedroom door opens easily and quickly from the outside when locked				☐	☐
Sleeping room window has a net opening of 5.7 SF (minimum dimensions at least 24"high; at least 20" wide) **EXCEPT** per R310.2.1: at-grade escape windows – may have net clearance opening 5 SF				☐	☐
Sleeping room window has a maximum sill height of 44" above floor to clear opening; no steps under window allowed				☐	☐
SLEEPING ROOM C	☐ **Type S**	☐ **Type NS1**	☐ **Type NS2**	**YES**	**NO**
Closet door/s are readily openable from the inside ☐ **Yes** ☐ **No** ☐ **N/A**		Smoke alarm is installed in the bedroom		☐	☐
Bedroom door opens easily and quickly from the outside when locked				☐	☐
Sleeping room window has a net opening of 5.7 SF (minimum dimensions at least 24"high; at least 20" wide) **EXCEPT** per R310.2.1: at-grade escape windows – may have net clearance opening 5 SF				☐	☐
Sleeping room window has a maximum sill height of 44" above floor to clear opening; no steps under window allowed				☐	☐
SLEEPING ROOM D	☐ **Type S**	☐ **Type NS1**	☐ **Type NS2**	**YES**	**NO**
Closet door/s are readily openable from the inside ☐ **Yes** ☐ **No** ☐ **N/A**		Smoke alarm is installed in the bedroom		☐	☐
Bedroom door opens easily and quickly from the outside when locked				☐	☐
Sleeping room window has a net opening of 5.7 SF (minimum dimensions at least 24"high; at least 20" wide) **EXCEPT** per R310.2.1: at-grade escape windows – may have net clearance opening 5 SF				☐	☐
Sleeping room window has a maximum sill height of 44" above floor to clear opening; no steps under window allowed				☐	☐
SLEEPING ROOM E	☐ **Type S**	☐ **Type NS1**	☐ **Type NS2**	**YES**	**NO**
Closet door/s are readily openable from the inside ☐ **Yes** ☐ **No** ☐ **N/A**		Smoke alarm is installed in the bedroom		☐	☐
Bedroom door opens easily and quickly from the outside when locked				☐	☐
Sleeping room window has a net opening of 5.7 SF (minimum dimensions at least 24"high; at least 20" wide) **EXCEPT** per R310.2.1: at-grade escape windows – may have net clearance opening 5 SF				☐	☐
Sleeping room window has a maximum sill height of 44" above floor to clear opening; no steps under window allowed				☐	☐
SLEEPING ROOM F	☐ **Type S**	☐ **Type NS1**	☐ **Type NS2**	**YES**	**NO**
Closet door/s are readily openable from the inside ☐ **Yes** ☐ **No** ☐ **N/A**		Smoke alarm is installed in the bedroom		☐	☐
Bedroom door opens easily and quickly from the outside when locked				☐	☐
Sleeping room window has a net opening of 5.7 SF (minimum dimensions at least 24"high; at least 20" wide) **EXCEPT** per R310.2.1: at-grade escape windows – may have net clearance opening 5 SF				☐	☐
Sleeping room window has a maximum sill height of 44" above floor to clear opening; no steps under window allowed				☐	☐

GENERAL	YES	NO
Bathroom doors are easily and quickly openable from the outside when locked	☐	☐
Carbon Monoxide alarms are installed as required in R315 on each level of the home.	☐	☐
Smoke alarms are installed on all levels of the dwelling, in each resident sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms (R314).	☐	☐
Smoke and Carbon Monoxide alarms are installed in such a manner so that the audible warning may be heard in all parts of the dwelling upon activation of a single device.	☐	☐
Access road and water supply meet local fire jurisdictional requirements.	☐	☐
R330.4 Operable parts of door handles, pulls, latches, locks and other devices installed in AFH shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist (lever-type).	☐	☐
Pocket doors shall have graspable hardware available when in the closed or open position.	☐	☐

R311.8 Ramps		YES	NO
Inside Ramp	**N/A** ☐	☐	☐
R311.8.1 Maximum Slope one unit vertical in twelve units horizontal (8.3% slope). (Exception R311.8.1 Not allowed in AFH R330.9)		☐	☐
R311.8.2 Landing Requirements: min. 3X3 foot landing at top/bottom, where doors open onto ramps, and where ramp changes directions.		☐	☐
R330.9.1 Handrails required on both sides of ramp.		☐	☐
Outside Ramp	**N/A** ☐	YES	NO
R311.8.1 Maximum Slope one unit vertical in twelve units horizontal (8.3% slope). (Exception R311.8.1 Not allowed in AFH R330.9)		☐	☐
R311.8.2 Landing Requirements: min. 3X3 foot landing at top/bottom, where doors open onto ramps, and where ramp changes directions.		☐	☐
R330.9.1 Handrails required on both sides of ramp.		☐	☐
R312.1.1 Guards shall be located along open-sided walking surfaces, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the open side. Guards below are depicted vertically as an example only.		☐	☐



R311.2 Means of Egress	**YES**	**NO**
R311.2 Door must be side-hinged with min. width of 32 inches between face of door and stop. Height not less than 78 inches.	☐	☐
R330.4 Operable parts of door handles, pulls, latches, locks and other devices installed in AFH shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist (lever-type).	☐	☐
R330.4 Required exit door hardware shall unlock inside and outside mechanisms when exiting the building allowing re-entry without use of key, tool or special knowledge.	☐	☐
R311.7 Stairways **N/A** ☐	**YES**	**NO**
R311.7.5.1 Riser Height: Max riser height shall be 7 ¾ inches (8 inches in structures built prior to July 1, 2004)	☐	☐
R311.7.5.1 Riser Height: Max riser height shall be 7 ¾ inches (8 inches in structures built prior to July 1, 2004)	☐	☐
R330.10.1 Handrails for Treads and Risers shall be installed on both sides of treads and risers numbering from one riser to multiple risers. Handrails shall be installed in accordance with R311.7.8.1 – R311.7.8.4	☐	☐
R330.8 Grab Bars in Bathrooms **N/A** ☐	**YES**	**NO**
Grab bars shall be installed for all water closets (toilets), bathtubs and showers according to R330.8.	☐	☐
Water Closets (toilet) shall have grab bars installed on both sides according to R330.8.3	☐	☐
Bathtubs shall have two vertical and three horizontal grab bars installed according to R330.8.4	☐	☐
Shower stalls have two vertical and horizontal grab bars mounted on all sides of shower according to R330.8.5	☐	☐
Shower stalls must be minimum size of 30 inches deep by 48 inches long (R330.11)	☐	☐

☐ **PASSED**

NAME OF AFH: _____

_____

Adult Family Home Project Address

_____

BUILDING DEPT. INSPECTOR'S NAME (PRINT)

_____ _____

BUILDING DEPT. INSPECTOR'S SIGNATURE **DATE:**

_____ _____

BUILDING DEPT. OFFICE ADDRESS **OFFICE PHONE NUMBER:**

Application and inspection checklist developed by Washington Association of Building Officials (WABO), in cooperation with Department of Social and Health Services (DSHS) for use by both departments and licensors in accordance with WAC 388-76-10700.

ADA GUIDELINES AND IBC CODES

The US Congress created guidelines for accessibility of public facilities through the Americans with Disabilities Act of 1991. The Americans with Disabilities Act (ADA) ramp guidelines apply only to access for new facilities or major renovations built after 1991 that are used by the general public, which includes government offices, polling places, office buildings, apartment buildings, restaurants, and retail stores.

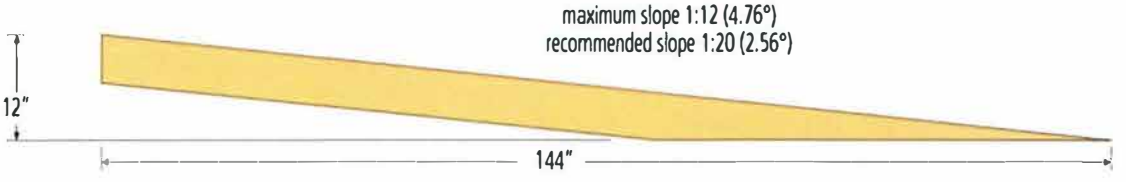
Our ADA compliant ramp systems must meet the following guidelines:

- A ramp should not exceed a 1:12 ratio. Every inch of rise needs 12 inches of ramp
- A ramp addressing more than 6 inches should have handrails
- A ramp exceeding 30 feet must have an intermediate platform
- A ramp must have side flanges of 2 inches or more to prevent accidental slipping from the edge
- Ramps and platforms must have nonskid surfaces and be designed to prevent water accumulation

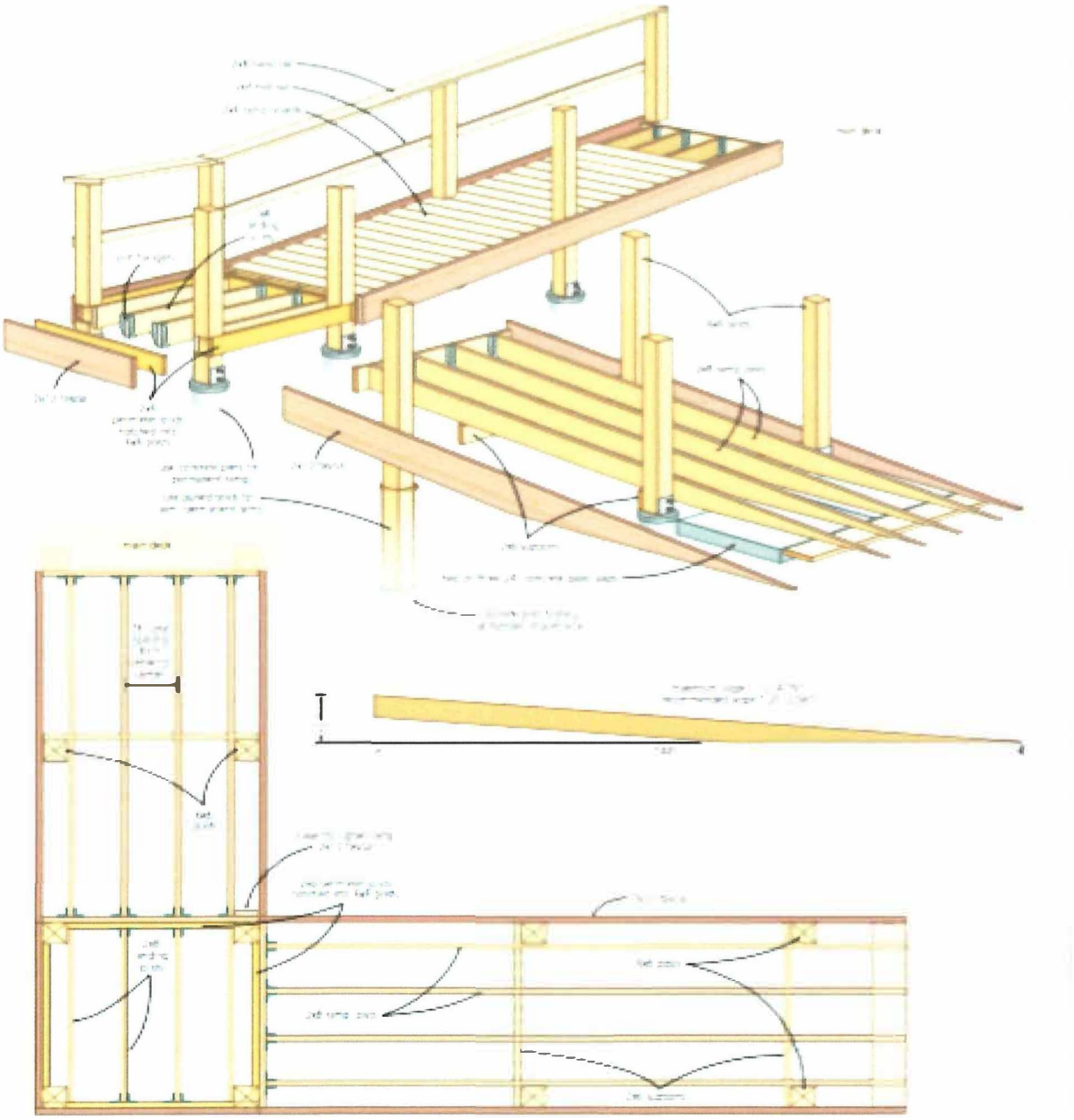
For more information on ADA guidelines, visit ADA.gov.

Get the Slope Right

One of the main features of any ramp is the slope, and you need to get that right. The plans show that the steepest an access ramp can be is 1 to 12. This means that for every 12 units of horizontal run there can be only one unit of vertical rise. That's as steep as a ramp can be by law in most places. If you've got the room, then it's better to spread that out a little bit and have it even shallower, 1 to 20 is a very nice slope, and very safe. These are the critical ratios that inform everything else that you do as you're building your ramp.



A wheelchair ramp is the single most important feature you can build into your home to make it more user-friendly for people with physical challenges. The thing is a wheelchair ramp must be built correctly to work well. It's important to get the right slope, landing and railing details.



Egress Window Requirements

The IRC 2021 or International Residential Code pertains to all single- and two-family homes.

The intent of the code is to keep you and your loved one safe by requiring a means of egress in basement level living spaces. The reason for needing a means of egress are twofold; to allow for an exit in case of an emergency, and to provide access for a firefighter to gain entrance. You will find that each product on this site clearly states whether it complies with the egress window requirements.

The code gets updated every three years. Check with your local building department to determine what version of this code is being enforced in your area at this time.

Here is an overview of section R310 of the code that are applicable to Egress Windows:

Egress windows (or doors) are required in every habitable space. Especially in any room used for sleeping purposes, it will require its own egress window. Remodeler: if you have an existing home and you add a sleeping room, or finish a separate living space in the basement, the code requires that you install an egress window to serve these spaces. Without a means of egress, these rooms can represent a dangerous fire trap if you do not have a quick and easy to operate emergency egress escape window. If you have a basement that has a bedroom, recreation room, den, family room, media room, office, or home gym. All these rooms are required to have a means of egress.

Basement Egress Window Requirements

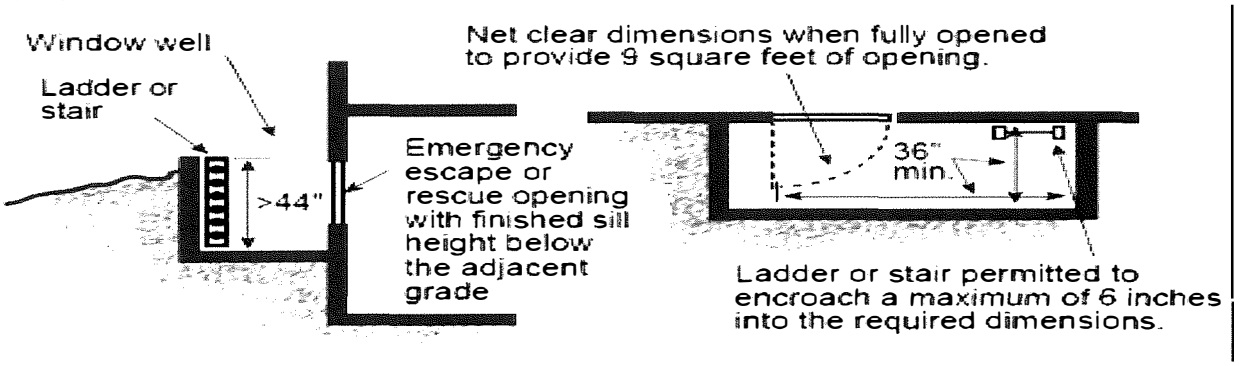
The bottom of the egress window opening can't exceed 44" from the finished floor.
The minimum opening area of the egress window is 5.7 square feet.
The minimum egress window opening height is 24" high. The minimum egress window opening is 20" wide.

Egress Window Wells

Egress window wells are required where the bottom of the egress window is below ground level.
The egress well must not interfere with the egress window fully opening.
The distance from the egress window to the back of the Egress well must be at least 36"
The minimum area of the egress well must be 9 square feet. (width x projection)

Egress Ladders and/or Steps

Egress ladders and or steps are required on window wells deeper than 44" and must be permanently attached. An egress ladder or step may encroach into well up to 6". Steps and/or distance between rungs of the ladder can't exceed 18". The rungs of an egress ladder must be 12" wide or greater and must project a minimum of 3" away from the back wall.



CATCHING RAIN:
Low Impact Development — Protecting Our Waters

1

Low Impact Development (LID) is one way we can help keep our waterways, as well as the surrounding land, healthy and safe. This is a beautiful place to live, so it is no wonder that an additional 1.9 million people are expected to move here by 2040. As we grow, we replace forests and prairies with rooftops and pavement, thereby increasing stormwater runoff and the associated pathogens and chemicals it carries to our waterways. The health of humans and our ecosystems is threatened.

Look for the other helpful fact sheets in this series:

What's the problem with stormwater?

Stormwater is created by precipitation (rain or snowmelt) that doesn't soak into the earth but instead creates puddles and runs off. This stormwater can pick up pollution and carry it directly into storm drains, streams, rivers, lakes, inlets, and bays.

Some consequences of stormwater pollution and increased surface runoff include:

- Pollutants such as motor oil, yard chemicals, and pet wastes contaminate local waterways, threatening human health and wildlife health.
- Numerous beaches are too polluted to harvest shellfish.
- Several fish species face the threat of extinction.
- Groundwater is not replenished, decreasing drinking water supplies and drying out streambeds.
- Winter rain quickly runs off paved surfaces and into streams, leading to the scouring of stream channels.

What is Low Impact Development and how can it help?

LID seeks to manage stormwater onsite—either by encouraging it to soak into the ground or using plants to transpire it back to the atmosphere. LID helps keep pollution out of our waterways. It focuses on recreating or protecting existing natural landscape features to minimize the amount of impervious (hard) surfaces. Stormwater is then treated with soils that have been amended with compost, vegetation, and other techniques.

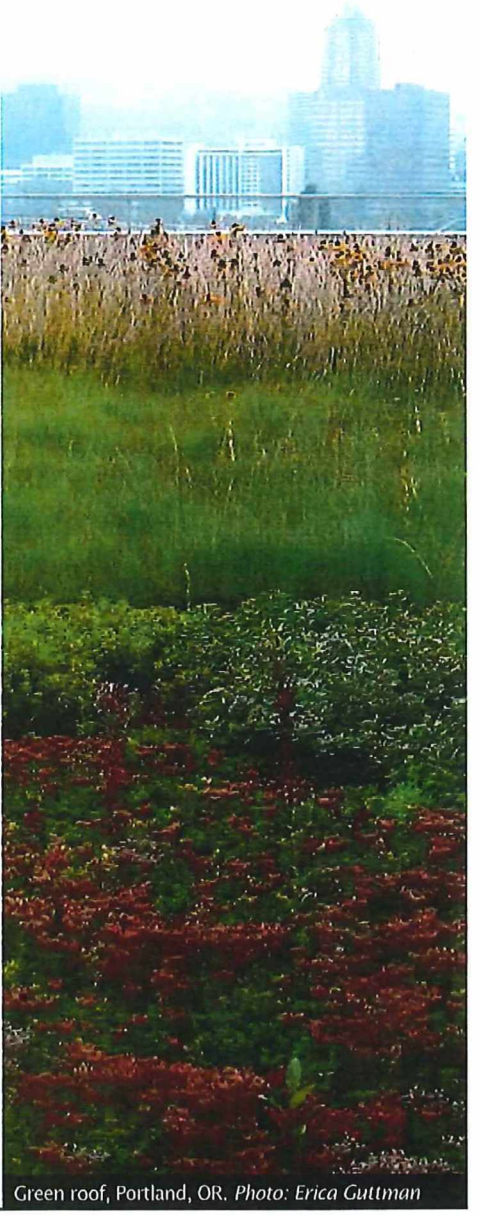
LID strategies can be used in virtually every situation—residential homes or commercial businesses, in rural or urban settings. Some benefits include:

- Creates more beautiful and easily managed landscapes.
- Encourages water to soak into the ground, replenishing drinking water supplies.
- Reduces contamination of local waterways, including recreational and shellfish growing areas.
- Preserves or restores trees and other vegetation, attracting birds, butterflies and other wildlife.
- Can reduce development costs (decreased infrastructure and land clearing costs) as well as stormwater management costs.

Vegetation Preservation and Restoration

During site development, clearing and grading should be minimized as much as possible. This will protect native soils and vegetation while also preventing compacted soils that do not allow water to soak in as readily. Mature trees are not easy to replace and their contribution to managing stormwater run off and preventing erosion is invaluable. When clearing land, small native plants can be removed and saved for replanting once development is complete.

Reducing lawn sizes and replacing that space with native or water-wise plants reduces maintenance and watering needs and may reduce the need for fertilizers and pesticides.



Green roof, Portland, OR. *Photo: Erica Guttman*

CATCHING RAIN:
Washington's New LID Stormwater Regulations

2

Washington State has new rules for how cities and counties manage stormwater runoff. Washington cities and counties under a Municipal Stormwater Permit have a legal obligation to prevent pollution from rainwater that washes over roofs, driveways and developed areas. The new rules will require many future developments to incorporate certain Low Impact Development (LID) techniques.

LID techniques imitate the natural processes that help rainfall absorb into the ground, instead of running into pipes and large holding ponds that drain to streams and water bodies. LID measures, such as rain gardens, bioretention facilities, and permeable pavements, treat and retain stormwater at the source. These practices help preserve fish and wildlife by keeping natural waters clean.

Washington State Municipal Stormwater Permits, administered by the Department of Ecology, govern how cities and counties manage stormwater runoff. Three separate permits covering different parts of the state were recently updated, and LID requirements were added. The Phase I permit applies to Tacoma, Seattle, and the four most populous counties in Western Washington. The Phase II permit for Western Washington covers 80 cities and the urban portion of four counties. The Phase II permit for Eastern Washington covers 18 cities and urban areas of six counties.

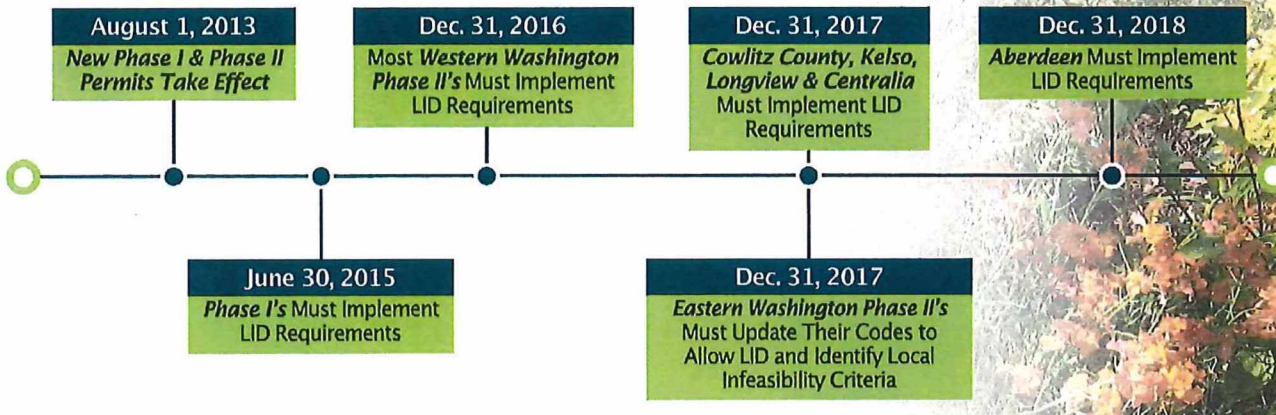
Look for the other helpful fact sheets in this series:

1. Low Impact Development
2. ✔ LID Stormwater Regulations
3. LID Development Process
4. Pavement Maintenance
5. Rain Garden Maintenance
6. Rain Garden Construction Checklist
7. Rain Garden Construction Sequencing

Local Development Codes will be Revised to Include LID Measures

The new permits require Phase I cities and counties to enact codes incorporating LID measures by June 30, 2015, and most Phase II jurisdictions in Western Washington must follow suit by the end of 2016. The Stormwater Manual for Western Washington, revised in 2012, contains the LID design details. The Eastern Washington permittees must update their codes, if needed, by December 31, 2017. The Department of Ecology, in collaboration with Eastern Washington permittees, is still developing a stormwater manual with LID practices for the east side of the state.

Timeline for New LID Requirements in Washington State



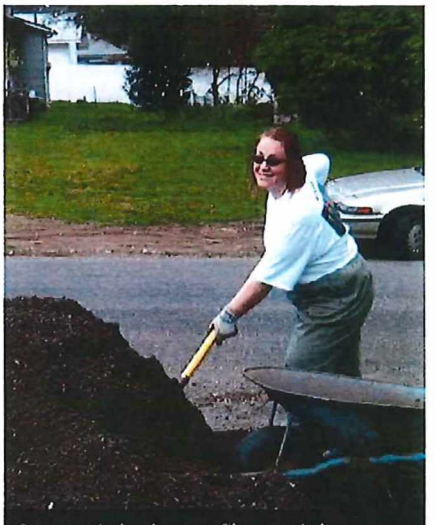
The permits for eastern and western portions of the state take substantially different approaches, because the soil, climate and geology vary substantially between the two regions, and these factors have a major influence on how stormwater runoff behaves. The LID measures for Eastern Washington are less developed, requiring only that initial steps be taken to implement LID techniques. For example, new developments in Eastern Washington will be required to retain runoff on-site or in regional stormwater facilities. Most Eastern Washington cities and counties covered by the permit already meet this requirement; the others can develop criteria for when LID measures are not feasible. LID measures must be allowed in Eastern Washington, but will not be required.

Continued >

Amending Soils

Healthy soil grows healthier plants, allows stormwater to soak in, stores water for plants in the summer, and reduces the need for chemicals such as pesticides and fertilizers.

Where soil must be disturbed, breaking up compaction, replacing topsoil or tilling in compost is very beneficial.

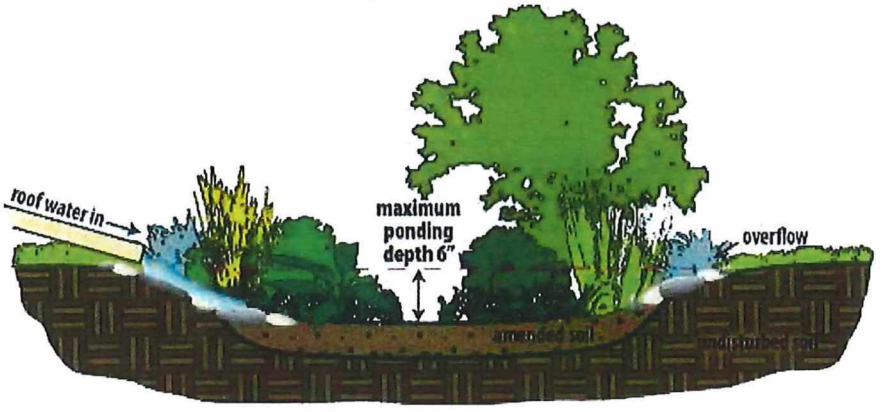


Compost in landscapes filters and slows rainwater and results in healthier soils and plants. *Photo: Erica Guttman*

Rain Gardens

Rain gardens are a landscape amenity that also serves to treat polluted runoff and manage drainage by using natural processes: plants and soils work together to filter and absorb water from streets, rooftops, driveways and other hard surfaces.

This landscaping technique is beautiful and inviting to birds and butterflies. Using native plants and amended soils can reduce maintenance needs. Rain gardens can be constructed in many different shapes and can be landscaped with a variety of plants.



A rain garden is an attractive way to manage polluted runoff on site. *Photo: Erica Guttman*

Managing Water on Roofs

Green Roofs:

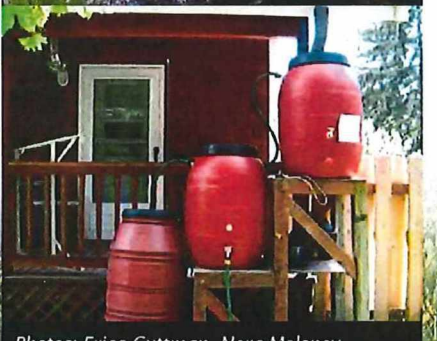
Green roofs are a great way to absorb and slow down roof runoff. They improve aesthetics to the residence or business as well as reduce noise and lower heating and cooling costs. Unlike conventional roofs, green roofs have less UV degradation, so they last much longer—it is recommended that after 50 years the waterproof membrane be replaced, but all other components can be reused on the same roof!

Directing Downspouts:

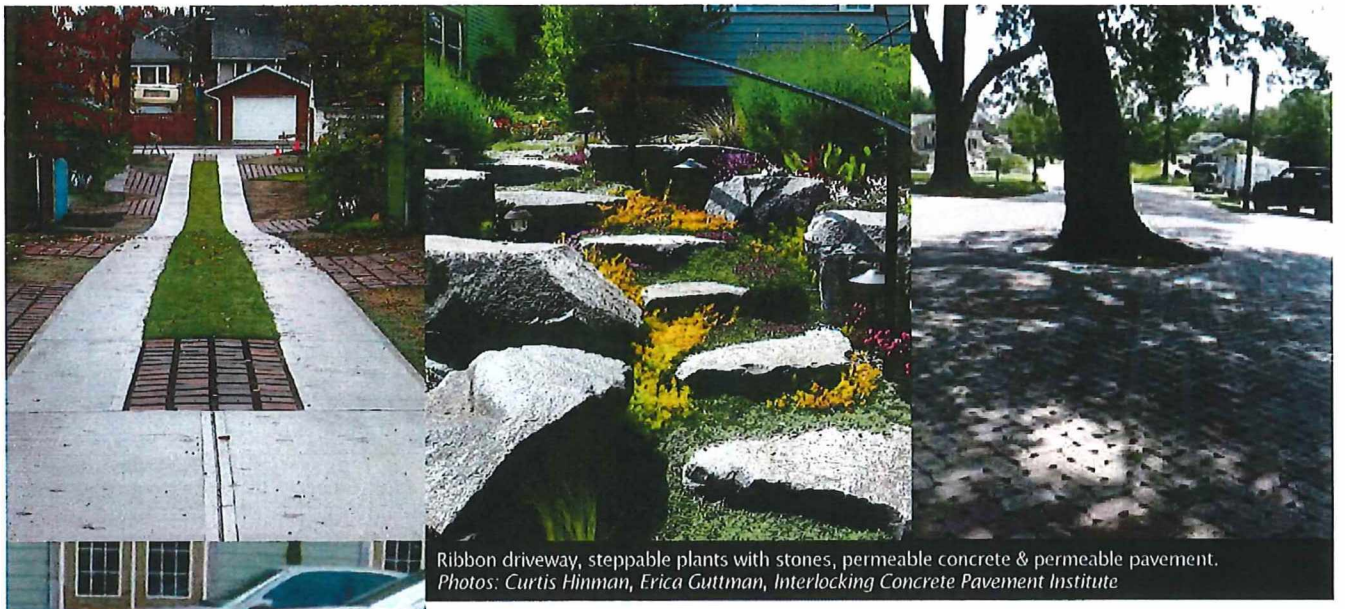
If green roofs are not an option, water can be directed from downspouts to areas such as a rain garden or planted area (versus pavement), where it can soak into the ground.

Rainwater Harvesting:

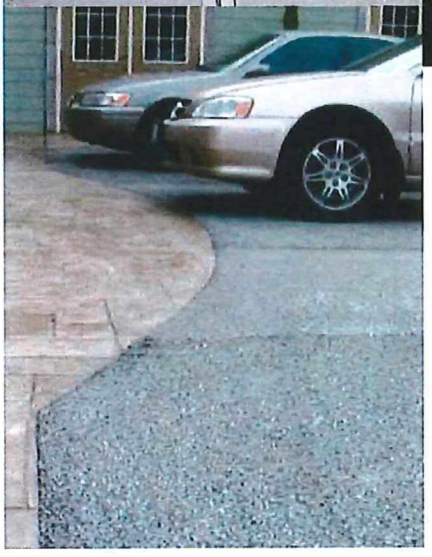
Rainwater harvesting combines two important LID goals: reduce flows from rooftops, and conserve water that comes from drinking-water supplies. Rainwater can be collected in rain barrels or cisterns where it can be stored. The collected water can then be used for a variety of things such as watering and cleaning jobs around the outside of homes.



Photos: Erica Guttman, Nora Moloney



Ribbon driveway, steppable plants with stones, permeable concrete & permeable pavement.
Photos: Curtis Hinman, Erica Guttman, Interlocking Concrete Pavement Institute



Options to Reduce Hard Surfaces

Driveways and walkways often account for a large amount of impervious area surrounding homes. Several LID solutions allow stormwater runoff to soak into the earth, preventing pollution from entering waterways and decreasing possible flooding risks.

Driveways and Parking Lots:

Many beautiful and functional materials and strategies allow rainwater to soak into driveways and parking lots. Reducing the length and width of driveway and parking areas is a perfect way to start reducing impermeable surfaces. Some style and material alternatives include the ribbon driveway, broken-concrete mosaic, permeable pavers, grid aggregate containment systems, pervious concrete and porous asphalt.

Walkways, Patios, and Decks:

Traditional concrete or mortared patios and walkways can be replaced with a variety of LID options. Raised decks made from recycled plastics are an excellent alternative. Walkways and patios can be constructed using stones or broken concrete with plantings in the gaps between stones to absorb water. Pervious systems, including stone pavers and interlocking plastic grids are great options as well.

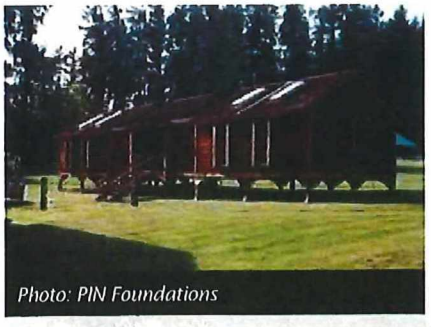


Photo: PIN Foundations

Foundations

When planning new construction or an addition to a home or business, a key strategy is to disturb soils as little as possible. Two LID techniques include:

Small Footprint:

A building's footprint can be reduced by decreasing the amount of space taken up all together or by creating two stories instead of a large one-story.

Minimal-excavation Foundation:

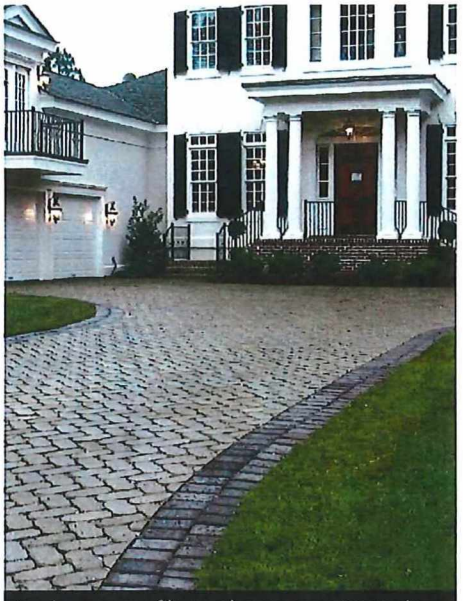
A minimal-excavation foundation dramatically limits soil disturbance over traditional grading and foundation installation.

CATCHING RAIN:
Low Impact Development — Protecting Our Waters

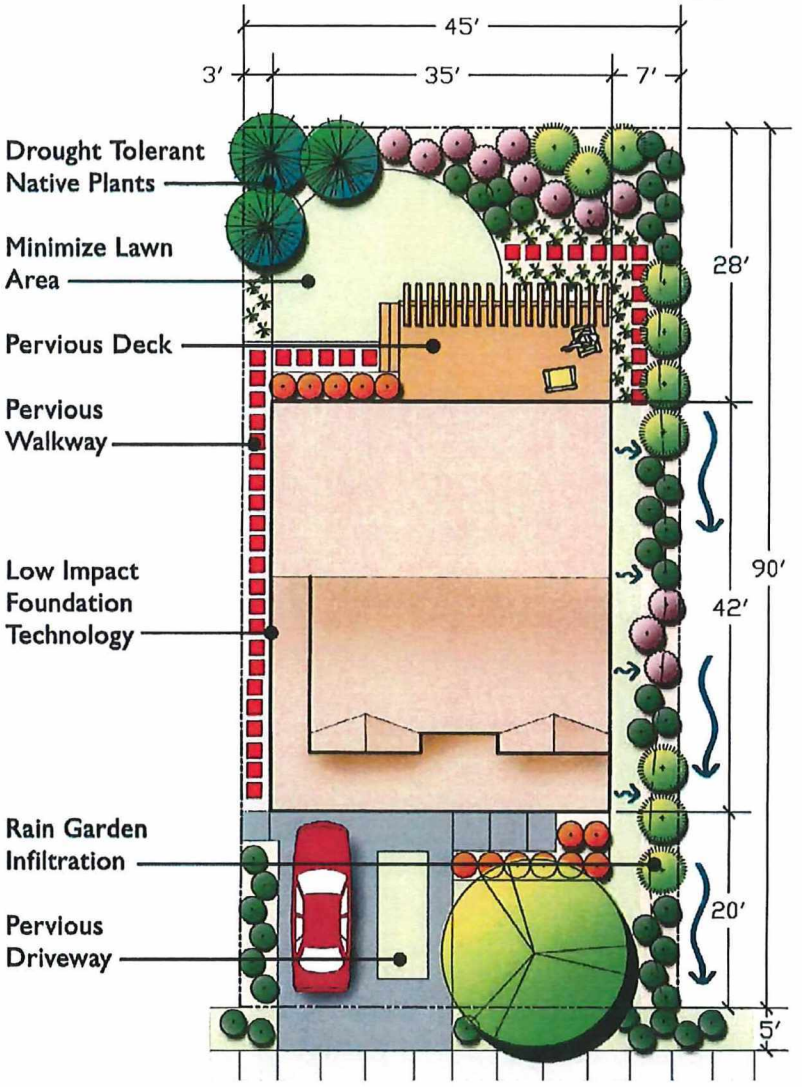
1

Residential Area with LID Features

LID practices may be incorporated around homes and businesses in countless ways. Just a few methods can be used or an entire lot can be designed and developed using LID techniques for everything from building design to landscape design. These techniques create beautiful homes and yards, keeping the sites safer from flooding risks. Utilizing LID methods helps to absorb polluted water into the earth, which protects water bodies, wildlife, and human health.



Pervious pavers filter and manage water on site.
Photo: Interlocking Concrete Pavement Institute.



Resources:

Washington Stormwater Center: http://www.wastormwatercenter.org/
Washington Department of Ecology: http://www.ecy.wa.gov/programs/wq/stormwater/
Puget Sound Partnership: http://www.psp.wa.gov/stormwater.php
Municipal Research and Services Center of Washington: Local Stormwater Programs and Regulations
http://www.mrsc.org/subjects/environment/water/sw-local.aspx
EPA Low Impact Development: http://water.epa.gov/polwaste/green/
WSU Rain Garden Website: http://raingarden.wsu.edu

Online Publications and Videos:

2012 Stormwater Management Manual for Western Washington
http://www.ecy.wa.gov/programs/wq/stormwater/manual.html
Low Impact Development Technical Guidance Manual for Puget Sound
http://www.psp.wa.gov/LID_manual.php
Building a Raingarden: Keeping our Pacific Northwest Waters Clean Video: http://vimeo.com/21474307
Raingarden Handbook for Western Washington Homeowners
http://county.wsu.edu/mason/nrs/water/Documents/Raingarden_handbook.pdf

DEPARTMENT OF ECOLOGY
State of Washington

WASHINGTON STATE UNIVERSITY EXTENSION

Developed by Washington State University Extension with funding from the Washington State Department of Ecology.
Authors: Erica Guttman, Nora Moloney and Bob Simmons. Source: *Low Impact Development Technical Guidance Manual for Puget Sound*, 2012.

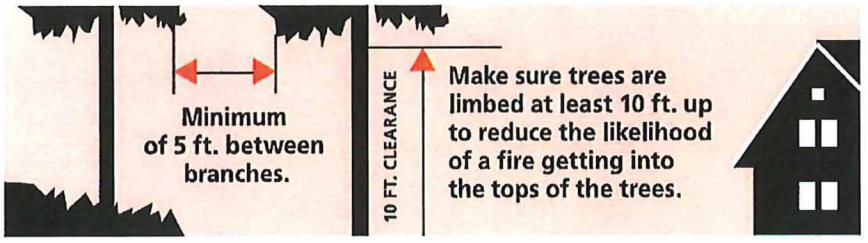
WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

Fire Prevention

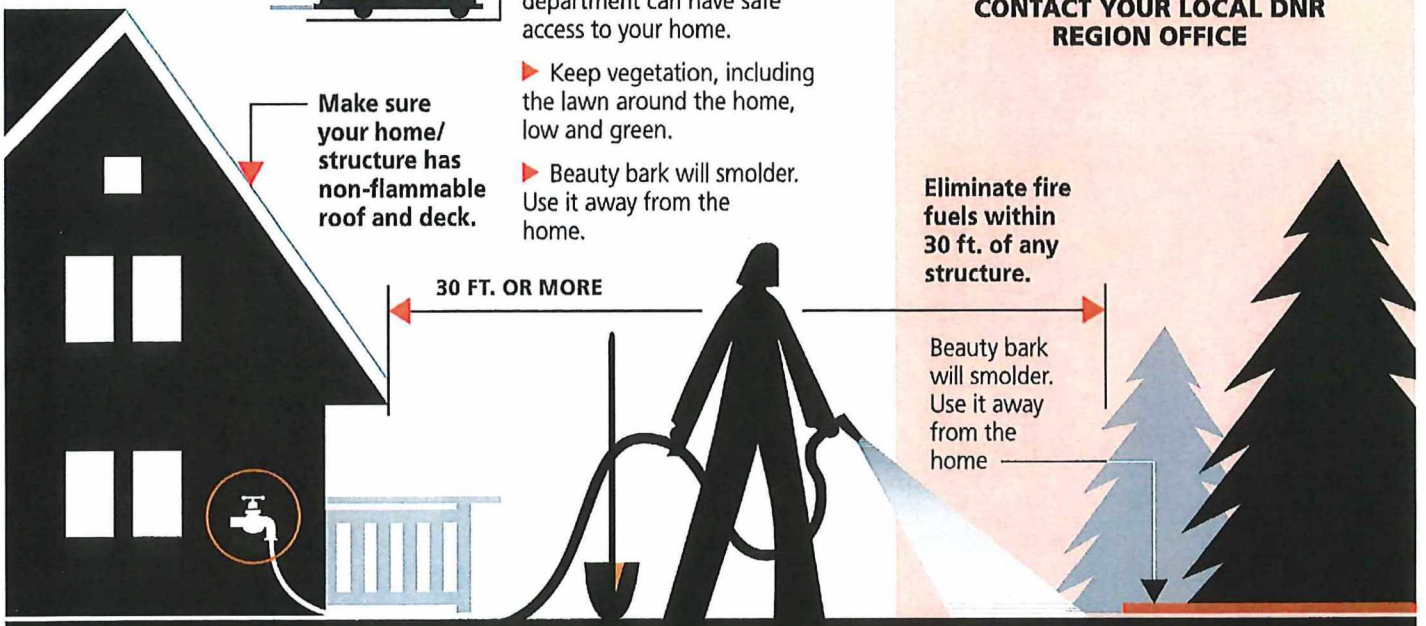
Defend Your Home from Wildfire

NO COST EVALUATION

* If you live in **DNR's Northeast Region, 509-684-7474** or **DNR's Southeast Region, 509-884-3472**, DNR foresters can come out and assess your home at no cost.



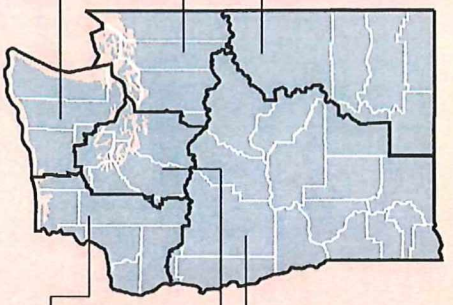
- Trim vegetation so the fire department can have safe access to your home.
- Keep vegetation, including the lawn around the home, low and green.
- Beauty bark will smolder. Use it away from the home.



Northwest Region
360-856-3500

Olympic Region
360-374-2800

Northeast Region*
509-684-7474



Pacific Cascade Region
360-577-2025

Southeast Region*
509-925-8510

South Puget Sound Region
360-825-1631

FOR MORE INFORMATION ABOUT FIRE PREVENTION, CONTACT YOUR LOCAL DNR REGION OFFICE

dnr.wa.gov

TO REPORT A FIRE, PLEASE CALL 1-800-562-6010

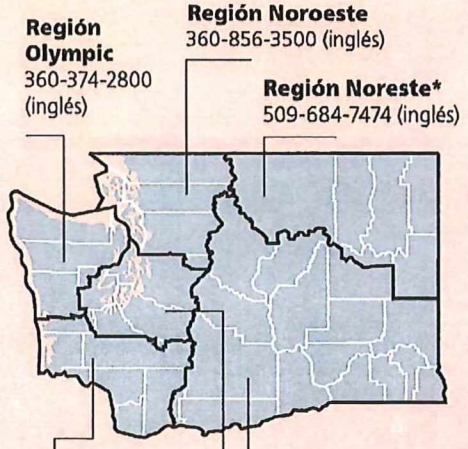
WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

Prevención de Incendios

Defienda Su Casa de Incendios Forestales

EVALUACIÓN GRATIS

* Si vive en la **Región Noreste de DNR (Departamento de Recursos Naturales), 509-684-7474** (inglés) o en la **Región Sudeste de DNR, 509-925-8510** (inglés), y no está seguro de cuan segura es su casa contra incendios, personal de DNR puede venir a evaluar su casa sin costo alguno.



PARA MÁS INFORMACIÓN SOBRE PREVENCIÓN DE INCENDIOS, COMUNÍQUESE CON LA OFICINA REGIONAL DE DNR MÁS CERCANA

dnr.wa.gov

PARA REPORTAR UN INCENDIO, POR FAVOR LLAME AL 1-800-562-6010 (INGLÉS)

HOW TO PREPARE YOUR HOME FOR WILDFIRES

WILDFIRE RISK REDUCTION STEPS THAT CAN MAKE YOUR HOME SAFER DURING A WILDFIRE

VEGETATION MANAGEMENT

1. HOME IGNITION ZONES

Limiting the amount of flammable vegetation, choosing fire-resistant building materials and construction techniques, along with periodic exterior maintenance in the three home ignition zones - increases the chances your home will survive a wildfire when exposed to embers and/or a surface fire. The zones include the **Immediate Zone**: 0 to 5 feet around the house; **Intermediate Zone**: 5 to 30 feet; and the **Extended Zone**: 30 to 100 feet.

2. LANDSCAPING AND MAINTENANCE

To reduce ember ignitions and fire spread, trim branches that overhang the home, porch and deck and prune branches of large trees up to (depending on their height) 6 to 10 feet from the ground. Remove plants containing resins, oils and waxes and ensure mulches in the **Immediate Zone** (0 to 5 feet around the house) are non-combustible options like crushed stone and gravel. Maintain vegetation annually.

FIRE RESISTIVE CONSTRUCTION

3. ROOFING AND VENTS

Class A fire-rated roofing products offer the best protection. Examples include: Composite shingles, metal, concrete and clay tiles. Inspect shingles or roof tiles and replace or repair those that are loose or missing to prevent ember penetration. Box-in eaves, but provide ventilation to prevent condensation and mildew. Roof and attic vents should be screened to prevent ember entry.

4. DECKS AND PORCHES

Never store flammable materials underneath decks or porches. Remove dead vegetation and debris from under decks/porches and between deck board joints.

5. SIDING AND WINDOWS

Embers can collect in small nooks and crannies and ignite combustible materials; radiant heat from flames can crack windows. Use fire-resistant siding such as brick, fiber-cement, plaster or stucco and dual-pane tempered glass windows.

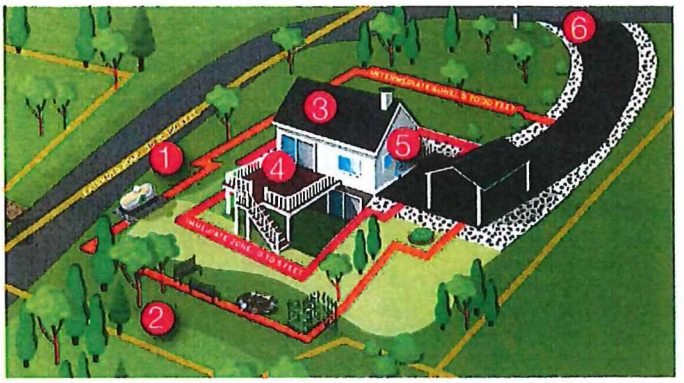
6. EMERGENCY RESPONDER ACCESS

Ensure your home and neighborhood has legible and clearly marked street names and numbers. Driveways should be at least 12 feet wide with a vertical clearance of 15 feet, for emergency vehicle access.

BE PREPARED

Develop, discuss and practice an emergency action plan with everyone in your home. Include details for pets, large animals and livestock. Know two ways out of your neighborhood and have a pre-designated meeting place. Always evacuate if you feel it's unsafe to stay – don't wait to receive an emergency notification if you feel threatened from the fire.

Conduct an annual insurance policy check-up to adjust for local building costs, codes and new renovations. Create/update a home inventory to help settle claims faster.



OTHER CONSIDERATIONS

- Store firewood away from the home
- Mow the lawn regularly
- Prune low-hanging tree branches
- Landscape with fire-resistant plants
- Create small fuel breaks with hardscaping features

TALK TO YOUR LOCAL FORESTRY AGENCY OR FIRE DEPARTMENT TO LEARN MORE ABOUT THE SPECIFIC WILDFIRE RISK WHERE YOU LIVE.

NFPA | FIREWISE USA™
RESIDENTS REDUCING WILDFIRE RISKS

VISIT FIREWISE.ORG FOR MORE DETAILS

Order a Reducing Wildfire Risks in the Home Ignition Zone checklist/poster at Firewise.org