



BENTON COUNTY BUILDING DIVISION PROCEDURE FOR OBTAINING FACTORY ASSEMBLED STRUCTURE (FAS) PERMIT

FAS applications and FAS permits are issued at 102206 E. WISER PARKWAY, KENNEWICK WA between 8:00 am -12:00 pm and 1:00 pm - 5:00 pm, Monday through Friday (except holidays).

Contact the Benton County Planning Div. at (509) 786-5612 to verify that the zone allows for the placement of a manufactured home (FAS). A Temporary Dwelling or Multiple Detached Dwelling permit is required if there is an existing dwelling on the property and this permit is for the placement of an additional dwelling on site.

Per BCC 3.20.040, no manufactured home/FAS shall be located on a space or lot until an Installation Permit has **first** been obtained from the Benton County Building Division. **No person shall deliver a FAS until they have verified that the owner or installer has obtained a permit for the location of the FAS.** Placement or movement of a FAS to any parcel prior to permit issuance will be assessed a fine double the original permit cost.

A FAS permit does not authorize the construction or attachment of carports, garages, decks, etc. for which separate building permits are required. Structures that are placed on slopes greater than 15% may be required to have noncombustible siding and/or soffits and decks may be required to have noncombustible skirting. Please contact the Benton County Fire Marshal for further information at (509) 735-3500.

REQUIRED ITEMS: All required items shall be submitted for review.

- a. FAS APPLICATION, attached.
- b. SEPTIC/SEWER Approval: **New residence:** copy of septic system permit, or an existing system evaluation (ESE) from the Health Dept. (Permits or final approval shall be one year old or less). If city sewer is available, an availability letter from the city must be submitted. ESE required for addition of bedrooms or for lots of one acre or less.
- c. PLOT PLAN, all required elements shall be shown (see attached sample).
- d. DECLARATION OF ACCESS EASEMENT if road approach is an access easement or your private driveway falls under the requirements of the International Fire Code. (See attached form) All access roads or private driveways over 200 feet long and/or which are over a 12% grade, are to be asphalt. Grades over 15% are not permitted.
- e. APPROVED ROAD APPROACH PERMIT from the Benton County Public Works Department (509) 786-5611 (if existing this may not be required, see road approach application). For an approach application to a state road, contact DOT at (509) 577-1668, (509) 577-1633.
- f. WATER AVAILABILITY - If water system is a community well, obtain a letter from the water association stating potable water is available. If system is a private well, submit a copy of the well log and attached WATER AVAILABILITY NOTIFICATION, Sec. C. If you are on city water, you will need a water availability letter from the city (check for any additional requirements the city may have). **A Mitigation Certificate may be required see: <https://bentoncountywa.municipalone.com/pview.aspx?catid=45&id=21075> or check with the Benton County Planning Division.**
- g. Declaration of Owner Builder if owner is acting as general contractor, form attached.
- h. FAS's built prior to June 15, 1976, require Dept. of L. & I. Fire and Safety Inspection approval documentation.
- i. Copy of title, registration, purchase agreement or other proof of manufactured date required for all FAS's.

NOTE: Structures that are placed on fill and or placed on or near slopes require the approval of a Washington State Registered Geo Technical Report.

Benton County Code requires that a footing/setback, setup/occupancy and a final inspection be completed prior to the expiration date on the FAS permit. Violation of this code may be subject to a fine and requires a reapplication fee. It is the responsibility of the FAS permit holder or their authorized agent to call for inspections.

FACTORY ASSEMBLED STRUCTURE INFORMATION

- ◆ **FLOOD ELEVATION CERTIFICATE**, if applicable, submitted prior to issuance and at final inspection (certificate available at building division). **All structures located within a Floodplain are subject to the requirements of BCC 3.26, including certification by a Washington State Registered surveyor and/or Engineer.**

ADDITIONAL JURISDICTIONS TO BE CONTACTED

BENTON COUNTY PLANNING DIVISION

PUBLIC SERVICES BLDG – 102206 E. Wiser Parkway, Kennewick WA
PROSSER COURTHOUSE – 620 Market Street, Prosser WA
P.O. Box 910, PROSSER
Phone (509) 786-5612

BENTON-FRANKLIN DISTRICT HEALTH DEPARTMENT - septic systems/wells

KENNEWICK OFFICE - (509) 460-4205 - 7102 W. Okanogan Place, Kennewick WA

DEPT. OF LABOR & INDUSTRIES - Electrical permit or Alterations - (509) 735-0100 - 4310 W. 24th Avenue, Kennewick WA

OVERSIZE LOAD PERMIT - Must be obtained from the Benton County Public Works Dept. or the State Department of Transportation after FAS Permit is issued. Issuance of oversize load permit authorizes movement on County road only, this does not authorize placement on any parcel of land without a FAS placement permit.

PUBLIC SERVICES BUILDING – 102206 E. Wiser Parkway, Kennewick WA
Benton County Courthouse – 620 Market Street, Prosser WA
Phone (509) 786-5612

TAX CERTIFICATE FOR MOBILE HOME MOVEMENT - Not required for new Factory Assembled Structures

BENTON COUNTY TREASURER - (509) 735-8505 - 7122 W Okanogan Place, Suite E110, Kennewick, WA

BENTON CLEAN AIR AGENCY

The Benton Clean Air Agency requires all projects within unincorporated Benton County that disturb the topsoil to submit contact information to their agency, as well as an acknowledgement that they understand their responsibility to control dust and that they have a dust control plan onsite. For more information contact (509) 783-1304 or visit www.bentoncleanair.org.

INSPECTION REQUESTS: Call the Benton County Building Division at (509) 736-2763. This line will be available 24 hours per day, 7 days per week. A minimum of 24 hours advance notice is required. Inspection requests called in on Fridays after 4:00 p.m. will be performed within two working days. Inspection requests called in on weekends and holidays will also be performed within two working days. The above phone number is for inspection requests only. For all other business, please contact the Building Division at 735-3500 during normal working hours, Monday thru Friday, 8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m. **All information for items 1 thru 6 below must be provided or the inspection cannot be scheduled:**

1. Name on permit
2. Permit number
3. Project address
4. Type of inspection
5. Date you need inspection
6. Name and telephone number of person requesting inspection.

Be sure to have the permit posted in a conspicuous place, the blocking diagrams on the job site and a temporary address posted during construction.

Hiring A Contractor Or Remodeler

What you should know



While the law provides some protection from fraudulent or incompetent contractors, it doesn't guarantee honest transactions or perfect performance. If you're planning to hire a contractor or remodeler, shop smart.

What does the law require?

In Washington, contractors must register with the Department of Labor and Industries, post a bond and carry general liability insurance coverage.

A general contractor must maintain a \$6,000 bond. A specialty contractor, such as a painter, must maintain a \$4,000 bond. Dissatisfied consumers may pursue restitution by taking civil action against a contractor's bond in Superior Court.

All registered contractors must carry general liability insurance coverage (\$20,000 property damage and \$100,000 public liability or \$120,000 combined single limit).

Contractors must also possess a current unified business identifier (UBI) number and an employer identification number (EIN). (An EIN is optional for a sole proprietorship with no employees.)

Informed, cautious consumers can better protect their financial investment. This brochure tells you what to look for and avoid, if you're planning to hire a contractor or remodeler.

Get answers

Call Labor and Industries' local service centers, call the toll-free contractor registration hotline or check our website to learn:

If a contractor is currently registered.

How long the contractor has been registered.

If action against the contractor's bond is pending or has been taken in the past.

The name of the contractor's insurance company, if you want to verify coverage.

If you're not sure whether the work you're contemplating requires a registered contractor, call the hotline. In general, work that "adds to or subtracts from real estate" requires a registered contractor.

Businesses that provide services such as gutter cleaning, pruning, lawn care, or window washing do not need to be registered.

Look for the contractor registration number in advertisements for contractors. The law requires this number to be included in all advertisements, including the Yellow Pages.

Avoid lien problems

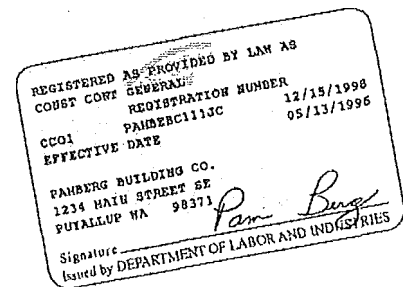
Before starting work, a contractor must provide you with a disclosure statement that advises consumers about lien releases. This requirement applies to projects that have a combined cost of labor and materials in excess of \$1,000.

Understanding lien releases is very important because a contractor's \$4,000 or \$6,000 bond may not be enough to cover a claim if one arises on your job. If any supplier of materials, worker or subcontractor is not paid, a lien may be filed against your property to force you to pay. You could pay twice for the same work. Or worse, an unpaid lien could lead to foreclosure. (For remodeling projects, liens can only be filed for the amount left unpaid to the general contractor).

Liens can be avoided. If during your project you receive a "notice of intent" to file a lien on your property, you may ask your general contractor to provide you with lien release documents from the supplier or subcontractor who has sent this notice. You can make the check payable to both the contractor and the material supply house.

The contractor is required to provide you with more information about lien release documents if you request it.

If you have requested lien release documents, avoid making final payment until you have received a lien release from suppliers & contractors.



Smart consumers ask questions, track progress

Before you hire a contractor or remodeler:

1. Plan your project carefully. If you know what you want done and can clearly explain it, you're less likely to misunderstand instructions or encounter cost overruns.
2. Try to interview several qualified contractors and solicit written bids. Bids that are significantly lower than all others should be questioned.
3. Make sure the contractor or remodeler is properly registered and bonded. Ask them to show you their L & I contractor registration card.

4. Ask for references. Then check them out.

5. Be wary of contractors who ask you to pick up the building permit. In most instances, the contractor is required to take out the permits. Permits are your protection. Make sure they are in place as work progresses and that your contractor or remodeler is named on the permit.

6. Try to anticipate problems and inconveniences, such as cost overruns or clean up, and come to agreement with your contractor on how they will be handled before he or she begins work.

Once you have hired a contractor or remodeler:

7. Obtain a written contract that includes price, sales tax and, if applicable, permit fees. Specify the work to be performed, materials used, start and completion dates and payment schedules.

8. Make sure you understand the terms before you sign anything.

9. When advancing money for materials, it may be possible to make checks payable to both the contractor and the supply house. Be very cautious about paying for work not yet completed.

10. Put all change orders in writing. Ask questions as work progresses. If you do not like an answer or don't understand it, stop the work until you do.

11. Make frequent inspections and consult your local building department. Be sure that all permits are in place and that inspections are in order.

It is illegal for contractors to advertise, submit bids or perform work without a valid contractor registration.

For more information, call an L & I service center listed in this brochure or the statewide toll-free hotline: 1-800-647-0982.

Call one of these L& I service centers for contractor information

Region 1

Bellingham 360-647-7300, Everett 425-290-1300, Mt. Vernon 360-416-3000

Region 2

Bellevue 425-990-1400, Seattle 206-281-5400, Tukwila 206-248-8240

Region 3

Bremerton 360-415-4000, Port Angeles 360-417-2700, Tacoma 253-596-3800

Region 4

Aberdeen 360-533-8200, Longview 360-577-2200, Tumwater 360-902-5799, Vancouver 360-896-2300

Region 5

East Wenatchee 509-886-6500, Kennewick 509-735-0100, Moses lake 509-764-6900, Okanogan 509-826-7345, Walla Walla 509-527-4437, Yakima 509-454-3700

Region 6

Colville 509-684-7417, Pullman 509-334-5296, Spokane 509-324-2600

**BENTON COUNTY BUILDING DIVISION
FACTORY ASSEMBLED STRUCTURE DEFINITIONS (FAS)**

CLASSIFIED AS MANUFACTURED/MOBILE HOME STRUCTURES:

MOBILE HOME - RED INSIGNIA

"Mobile home" means a "manufactured home" that is a structure, transportable in one or more sections, which in the traveling mode, is eight (8) body feet or more in width, or forty (40) body feet or more in length, or when erected on site, is 400 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein. Alterations to any mobile home require an inspection by the Dept. of L & I and a red insignia.

COMMERCIAL COACH - BLACK INSIGNIA

"Commercial coach" means a structure transportable in one or more sections that is built on a permanent chassis and designed to be used for commercial purposes with or without a permanent foundation when connected to the required outlets. May include plumbing, heating, air conditioning, and electrical systems contained therein. A commercial coach shall not be used as a single family dwelling but may contain sleeping rooms. Alterations to any commercial coach require an inspection by the Department of Labor and Industries and a black insignia.

CLASSIFIED AS TEMPORARY DWELLING:

RECREATIONAL VEHICLE - GREEN INSIGNIA

"Recreational vehicle" means a vehicular type unit primarily designed for recreational camping, travel, or seasonal use which has its own motive power or is mounted on or towed by another vehicle, has a gross floor area of not more than 320 sq. ft. The basic entities are: travel trailer, folding camping trailer, truck camper, motor home and multi-use vehicles. Alterations require an inspection by the Dept. of L & I and a green insignia.

PARK TRAILER - GREEN INSIGNIA - PT

"Park trailer" means a vehicular unit that is built on a single chassis and mounted on wheels. It is designed to provide seasonal or temporary living quarters that may be connected to utilities necessary for operation of installed fixtures and appliances. It has a gross trailer area not exceeding four hundred square feet. In calculating the square footage of a park trailer, measurement shall be taken on the exterior of the unit. The square footage includes all siding, corner trim, molding, storage space and area enclosed by windows but not the roof overhang. Alterations require an inspection by the Dept. of L & I and a green "PT" insignia.

MODULAR HOMES AND COMMERCIAL STRUCTURES - GOLD INSIGNIA:

Structures are manufactured in accordance with the latest adopted codes.

To be transported to site on a temporary frame or lowboy and installed on a permanent foundation. Inspection of alterations at the site is performed by the local authority having jurisdiction.

Factory assembled structures, including modular homes and manufactured/mobile homes (Gold Insignia) that meet the International Building Code and that are permanently affixed to a footing or foundation, shall be considered the same as site built single-family residential dwellings and are permitted outright wherever single-family residences may be located. All residential units shall have either a building permit, in the case of site-built housing, or a Factory Assembled Structure Permit and a gold insignia--indicating that they were inspected for International Building Code compliance in the factory.

STATE OF WASHINGTON)
County of Benton)

**To be completed by property/building owner.
Please initial applicable items where marked "INT" and
complete bottom signature area in full.**

1. DECLARATION OF OCCUPANCY USE (Accessory buildings only, i.e., garages, shops, barns, etc.)

INT _____ I **agree** that the structure for which a building permit is requested does not permit the occupancy of the structure for any use other than what was approved/permitted, or that does not comply with the requirements for the zone which it is placed per Title 11 BCC, unless approved by the Benton County Planning Division or by Conditional Use Permit. This structure will not be used or occupied for any use not permitted in accordance with the adopted International Residential and/or Building Codes. Violations will result in **five hundred dollar (\$500.00) infraction(s) for the first violation; a second or subsequent violation of the same provision, any person or contractor shall be found guilty of a misdemeanor. [BCC 3.04.065 and/or BCC 11.43.170]**

A misdemeanor is a crime punishable by a fine of not more than one thousand dollars, or by imprisonment in a county jail for not more than ninety days, or by both such fine and imprisonment. [RCW 9A.20.010 (2)]

**2. DECLARATION OF ACCESS CONSTRUCTION AND MAINTENANCE
(NOT REQUIRED for accessory buildings)**

INT _____ Said structure is served by perpetual non-exclusive access easement, auditor's file number _____, a private driveway in excess of 200' or an unimproved county right of way (contact B.C. Public Works for construction details) and the responsibility for construction and maintenance of this access to the location that the building will be constructed on shall be vested with the property owner and not Benton County.

INT _____ Said structure is served by an access easement, private driveway or unimproved county right of way not reflected by an auditor's file number, but one of the following applies.
(Initial one statement only)

INT _____ The following access easement, unimproved country right of way or private driveway has been granted a trail access permit to utilize the unimproved county right of way (access permit attached): _____

INT _____ The following access easement or private driveway is or will be graded and compacted with two (2) inches of base course crushed surfacing; the base course (1 1/2" minus) is to be in accordance with the specifications set forth in Standard Specifications for Road, Bridges and Municipal Construction published by the Washington State Department of Transportation. A minimum improved Fire apparatus turn around shall be provided for private driveways in excess of 150'. BCC 3.18.045: _____

INT _____ The following access easement or private driveway is or will be graded and compacted with two (2) inches of base course crushed surfacing; the base course (1 1/2" minus) is to be in accordance with the specifications set forth in Standard Specifications for Road, Bridges and Municipal Construction published by the Washington State Department of Transportation: _____

3. INT _____ Is your property accessed across a private bridge: YES _____ NO _____

4. DECLARATION OF OWNER BUILDER

INT _____ There will not be a general contractor (required to be registered) performing any work on the structure. The owner will verify Sub-contractor(s) license registration.

I, _____, certify under penalty of perjury under the laws of
(PRINT NAME)

the State of Washington that the foregoing initialed statement(s) for the structure is (are) true and correct.
Property parcel number _____ for proposed structure location.

Signature of property/building owner

Date

City, State (where signed)

**BENTON COUNTY
ADEQUATE WATER SUPPLY DETERMINATION FORM**

Each applicant for a building permit of a building necessitating potable water shall provide evidence of an adequate water supply for the intended use of the building. Evidence may be in the form of a water right permit from the Department of Ecology, a Benton County Mitigation Certificate, a letter from an approved water purveyor stating the ability to provide water, or another form sufficient to verify the existence of an adequate water supply. An application for a water right or mitigation certificate shall not be sufficient proof of an adequate water supply.

COMPLETE ONE OF THE APPLICABLE WELL TYPE SECTIONS BELOW

A. GROUP A - COMMUNITY/PUBLIC WELL *(To be completed by the water purveyor)*

The Public Water System _____ (system name),
State I.D. number _____ is capable of and will supply water to the
_____ building project for _____ connection(s) located at (tax parcel number)
_____.

The above Public Water System is approved for _____ service connection(s) and currently serves
_____. The water system facility necessary to adequately provide service to this site has been designed,
approved and installed per WAC 248-54. Connection to the system must be completed within two years of
the below date or this Availability Notification is void.

Purveyor's Signature _____ Title _____

Address _____

Date _____

GROUP B - SHARED WELL

The Group B System, Well I.D. number _____, State I.D. number
_____ is capable of and will supply water to the _____
building project for _____ connection(s) located at (tax parcel number)
_____.

Office use only: System compliance verified _____

B. STATE ISSUED WATER RIGHT WELL

Parcel # _____ Use of water for this
building is authorized by Water Right Permit/Certificate # _____ which has not been
canceled or relinquished. **Please attach a copy of the Water Right Permit or Certificate.*

C. INDIVIDUAL PRIVATE WELL

Parcel # _____ Well I.D. number _____
The water supply for this building will be obtained from a source which does not require a State issued
water right permit.

COMPLETE ONE OF THE APPLICABLE RURAL WATER SUPPLY PROGRAM SECTIONS BELOW

A. Please complete the following if the well is NOT located within the boundaries of the Mitigation Area for the Benton County Rural Water Supply Program, BCC Title 15:

Please initial and complete only one applicable statement:

_____ The above well is newly constructed. It was drilled by _____ a licensed well driller. Less than 5,000 gallons per day of water will be used from the well and less than one-half acre will be irrigated from the well.

**Please attach a copy of the well log.*

_____ The above well has been in existence and use since _____. Less than 5,000 gallons per day of water will be used from the well and less than one-half acre will be irrigated from the well.

**Please attach a copy of the well log if one is available. For wells drilled after 1993, add the Notice of Intent # if a well log is not available: _____. Contact the Dept. of Ecology at (509) 575-2639. Have available the section, township, range, quarter-quarter section and the name of the person who owned the property at the time the well was drilled.*

B. Please complete the following if the well IS located within the boundaries of the Mitigation Area for Benton County Rural Water Supply Program, BCC Title 15.18:

Please initial and complete only one applicable statement:

_____ The above well is newly constructed. The well was drilled by _____, a licensed well driller. Use of water from this well is authorized by a valid Benton County Mitigation Certificate, # _____.

**Please attach a copy of the Mitigation Certificate and well log.*

_____ The above well has been in existence and use since _____. Use of water from this well is authorized by valid Benton County Mitigation Certificate, File # _____.

**Please attach a copy of the Benton County Mitigation Certificate and well log if one is available. For wells drilled after 1993, add the Notice of Intent # if a well log is not available: _____. Contact the Dept. of Ecology at (509) 575-2490. Have available the section, township, range, quarter-quarter section and the name of the person who owned the property at the time the well was drilled.*

I hereby declare under the penalty of perjury that the above representations are true and correct and that the water supply serving this building is potable (suitable for drinking). I understand that the potability of water from a single family well is the sole responsibility of the well owner. It is recommended that your well be tested for bacteriological quality on an annual basis.

Owner's Signature: _____

Print Name: _____ Date _____

Mailing Address: _____

Email Address: _____

Community Development Department

Prosser Office:
620 Market Street, 1st Floor
Prosser, WA 99350
www.co.benton.wa.us



Building Division

102206 E. Wiser Parkway
Kennewick, WA 99338
Phone: (509) 735-3500
www.co.benton.wa.us

INFORMATION REQUIRED ON PLOT PLAN

One complete scaled drawing on 8 1/2" x 11" sheet of paper showing the following:

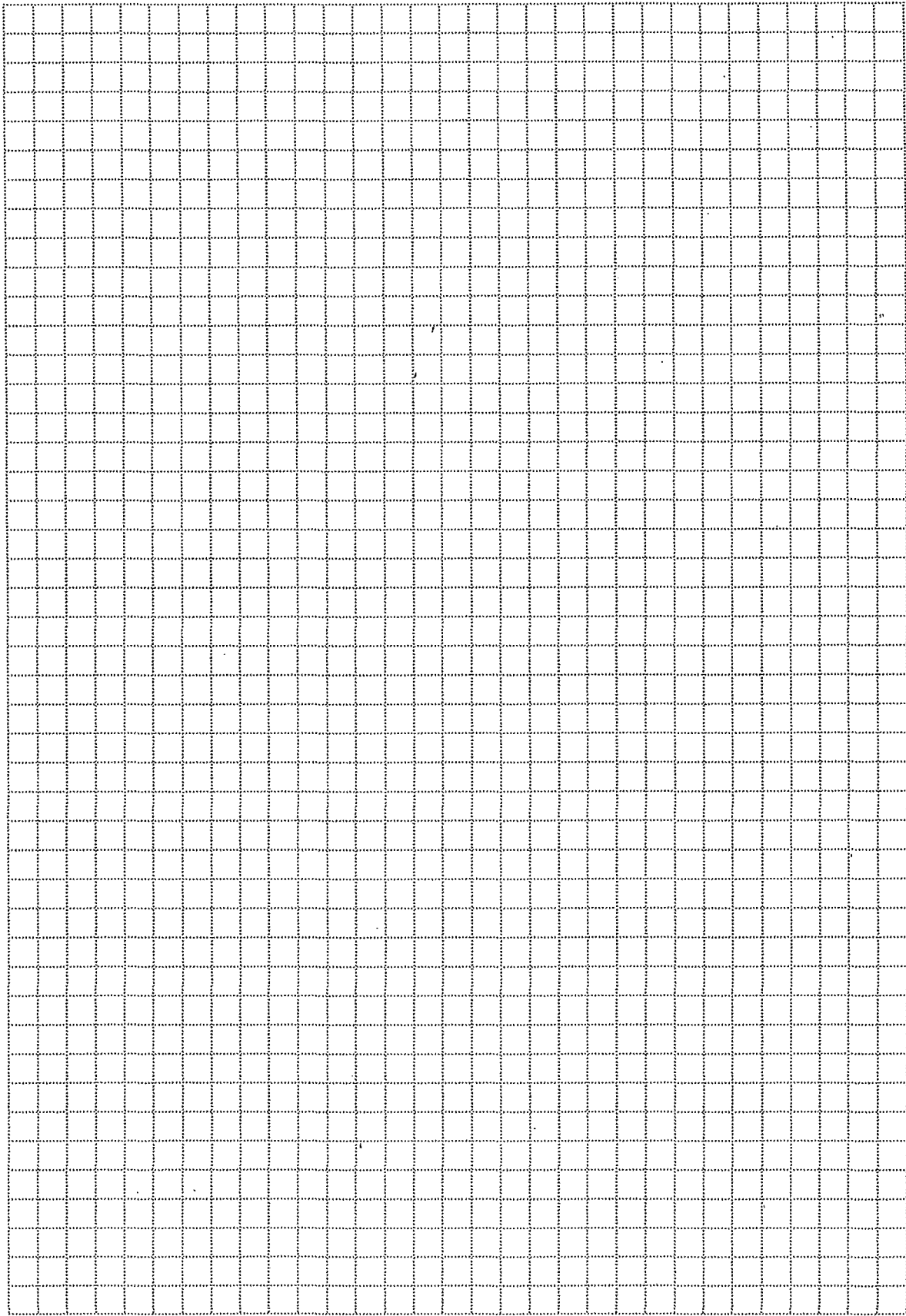
1. Property lines and dimensions
2. Direction of North
3. The proposed structure and all existing buildings
4. Setback of proposed structure from all property lines
5. Indicate main driveway location and distance from centerline of the driveway at the property line to nearest property corner. For parcels that are accessed through an adjacent property or a private road easement, indicate the route from the property line to the public road that will be used for access
6. All road names
7. Existing easements and any adjacent utility/access easements
8. Location of septic tank, drain field or sewer lines
9. Well location
10. Property address
11. Tax parcel number
12. Specify scale
13. Describe adjacent properties ground cover (sagebrush, pasture grass, weeds, etc.)
14. Identify all slopes greater than 10%
15. Date and signature of person drawing plot plan
16. Canals, streams, or drainage easements that your driveway must cross
17. Any proposed permanent or temporary structure including, but not limited to: buildings, signs, fences, etc. within 20 ft. of any PUD facility, such as power lines, power poles, and transformers, require prior approval from the PUD

SITE PLAN FOR _____

Scale 1" = 50' or 1" = 100'

Please specify

PLEASE INDICATE NORTH



BENTON COUNTY BUILDING DIVISION
INSPECTIONS REQUIRED FOR FACTORY ASSEMBLED STRUCTURES (FAS)

The FAS permit shall be placed on the outside of the structure facing the access road and remain in place until final inspection approval. Manufacturer set-up instructions and the approved site plan shall be onsite and readily available for inspector's use. **Written final septic approval from B-F District Health Dept. shall be onsite or submitted to the Building Div. by the FAS owner prior to the first inspection approval.**

FOOTING/SETBACK INSPECTION

1. Post Address at site
2. Job/Inspection card and approved site plan shall be on site.
3. Provide manufactures footing requirements, or Benton County approved detail.

SETUP/OCCUPANCY- To be completed prior to occupancy - Do not install skirting WAC 296-150M

1. The street number and/or space number shall be posted in contrasting colors 4" or larger on the front of the dwelling facing the road. The address shall also be temporarily posted at the driveway approach. Check at Building Division for specifics.
2. Water line shall be hooked up to the FAS with a shut-off valve accessible. Water line shall be insulated or heat taped.
3. Building drainage system shall comply with the Uniform Plumbing Code (see attached diagram).
4. Foundation and/or pier blocks shall comply with ANSI A225.1 or manufacturer setup instructions. Tie-downs required for all new and relocated FASs per WAC 296-105M and 296-150M-0610.
5. Vapor barrier/ground cover required. Six (6) mil black polyethylene or equal.
6. Cross-over ventilation line shall be supported four inches (4") from ground.
7. Septic system shall be approved for use by B.F. District Health Dept. **Written final approval provided on site or submitted to the Building Div. by the FAS owner.** All trenches shall be back-filled prior to first inspection.
8. Electrical meter shall be set, approved (green-tagged) for use by the Dept. of L&I and there shall be power to the FAS.
 - a. If L & I has green-tagged the job but the meter has not been set or another health/safety violation is found, a correction notice listing the violations, notification that the first/occupancy inspection was not approved and a statement of "DO NOT OCCUPY" shall be posted on site.
 - b. If a first/occupancy inspection is completed prior to electric meter installation and a request is made for an occupancy inspection separate from or prior to the final inspection, a special inspection fee shall be paid prior scheduling said inspection.
9. Temporary steps shall be at one door minimum.
10. Access easement and/or private driveway shall be installed. See Access Declaration for requirements.
11. Road approach shall be approved by Benton County Public Works (Engineering). If existing this may not be required, see road approach application. **Written final approval provided on site or submitted to the Building Dept. by the FAS owner.**

FINAL INSPECTION - To be completed prior to permit expiration

1. Approved weather resistant/approved skirting material (i.e., metal, concrete block, pressure treated wood) required around perimeter of FAS. Under-floor and water shut-off access (18x24 min.) installed.
2. Vent openings shall have a net area of one (1) sq. ft. per each one hundred and fifty (150) sq. ft. of underfloor area, per ANSI A225.1-6.8, or if vents are within 3' of corners 1/1500.
3. Dryer vent shall exhaust to exterior of structure/skirting. Smooth metal duct, no screws, with approved vent cap.
4. Hot water pressure relief valve shall drain to exterior of structure/skirting with a 90E bend pointing downward to a height of not more than 24" to 6" above finished grade.
5. All steps, landings, stairs and handrails shall comply with the International Building Code. Any decks/porches over 30" above grade and all covered decks require a separate building permit. Handout available upon request.
6. All surrounding grade shall slope away from structure.
7. Certified Installers name and WAINS # shall be posted on job card

WASHINGTON STATE STANDARDS FOR FAS INSTALLATION:

A. WAC 296-150M Foundation System Footings

- (1) Footings shall be constructed of:
 - (a) solid concrete or an approved alternate that is at least 3 1/2 inches by 16 inches square; or
 - (b) two 8-inch by 10-inch by 4-inch solid concrete blocks that are laid with their joint parallel to the main frame longitudinal member.
- (2) Footings shall be :
 - (a) evenly bedded and leveled;
 - (b) placed on firm, undisturbed, or compacted soil that is free of organic material, 4” below grade;
 - (c) centered in a line directly under the main frame longitudinal members on both sides of a FAS; and
 - (d) spaced not more than 8 feet apart and not more than 2 feet from the ends of the main frame. A closer spacing may be required, depending on the load-bearing capacity of the soil.
- (3) Tie-downs for all new FASs shall be constructed as per manufacturers specifications or per the design of a WA State registered engineer or architect. Tie-downs for all relocated FASs shall be constructed as per manufacturer's specifications. If the manufacturer's installation instructions are not available, you may use ANSI A225.1 (enclosed) or the instructions of a WA State registered engineer or architect.
- (4) A FAS with more than one section shall have center line blocking at end walls and at other point of connection of the sections of the FAS that are a ridge beam bearing support. Blocking is also required at both ends of a door opening that is 6 ft. or more wide in an exterior wall.
- (5) The load-bearing capacity of a load-bearing support or footing may be not less than the actual live and dead loads combined or 80 psf, whichever is greater, unless a soil analysis justifies a lesser load-bearing capacity. Fill shall be compacted to a minimum of 1500 psf.
- (6) If a FAS requires footings on its exterior perimeter, the footings shall be installed below the frost line. Footings for the main frame longitudinal members shall be recessed a minimum of 4” below frost line if frost heave is likely to occur.
- (7) Footings shall be constructed so that there is at least 18 inches clearance between the bottom of the main chassis members and the ground level.

B. Foundation System Piers:

An installer shall build and position piers and load-bearing supports or devices to distribute their required loads evenly. An installer may use manufactured piers or load-bearing supports or devices that are listed or approved for the intended use, or may build piers that comply with the following requirements. All blocks shall be concrete blocks.

- (1) A pier made be made of a single stack of 8-inch by 8-inch by 16-inch blocks if the blocks are not stacked more than three blocks high. A pier made of a single stack of blocks shall be installed at a right angle to the main frame longitudinal member and shall be capped with a 2-inch by 8-inch by 16-inch wood or concrete block.
- (2) A pier may be made of a double stack of 8-inch by 16-inch blocks are not stacked more than 5 blocks high. Each row of blocks in such a pier shall be stacked at right angles to the abutting rows of blocks. A hardwood block shall be used. The pier shall be capped with two 2-inch by 8-inch by 16-inch wood or concrete blocks. The pier shall be installed so that the joint between the cap blocks is at right angles to the main frame longitudinal member.
- (3) A pier may be made with more than five rows of blocks if the stacked blocks are filled with 2000 psi concrete or mortar. A licensed architect or professional engineer shall approve a foundation system that includes a pier that is higher than 72 inches (9 blocks) high, or in which more than 20 percent of the piers exceed 40 inches (5 blocks) high.
- (4) All blocks shall be set with the cores placed vertically.

C. Foundation System Plates and Shims

- (1) An installer may fill a gap between the top of a pier and the main frame with a wood plate that is not more than 2 inches thick and two opposing wedge-shaped shims that are not more than 2 inches thick.
- (2) Wood plates and shims shall be of hardwood. A shim shall be at least 4 inches wide and 6 inches long.

- (3) The installer shall fit the shim properly and drive it tight between the wood plate or pier and the main frame to ensure that the FAS is level and properly supported at all load-bearing points. A block that abuts a wedge-shaped shim shall be solid.

D. Assembly

- (1) Sections of a multiple section FAS shall be aligned, closed, and securely fastened at the required points along the ridge beam, endwalls, and floor line. Heat ducts, electrical connections, and other fixtures and connections required between sections of a FAS shall be properly installed. The floor of the FAS shall be level with the tolerances given in the following table.

** Tolerances may not exceed the following amounts (L equals the clear span between supports, twice the length of a cantilever):

Floor	L/240
Roof and Ceiling	L/180
Headers, Beams, Girders (Vertical Load)	L/180
Walls and Partitions	L/180

- (2) The installer shall provide adequate clearance to ensure that the cross-over heat duct does not touch the ground and is not compressed. The installer shall insulate the cross-over duct at the intersection. The installer shall insulate and seal areas of potential water leaks with metal flashing of trim, if required, and with putty tape or other approved caulking to ensure the FAS is water tight.
- (3) The water pipe connection to the FAS shall have a main shut off valve in compliance with 24 CFR 3280.609 (b) adopted as of April 1, 1982. In all other respects, utility connections to the FAS, including water, sewer, electricity, and gas, shall comply with local codes. Accessory structures attached to or located next to a home, such as awnings, carports, garages, porches, or steps, shall be constructed in conformance with local codes.

E. Foundation Fascia

- (1) A FAS shall have an approved foundation fascia around its entire perimeter. The wood of the fascia shall be at least three inches from the ground unless it is pressure-treated wood. Metal fasteners shall be galvanized, stainless steel, or other corrosion-resistance material. Ferrous metal members in contact with the earth, other than those that are galvanized or stainless steel, shall be coated with an asphaltic emulsion.
- (2) The skirting of a FAS shall be ventilated by an approved mechanical means, or by openings in exterior fascia or foundation walls. Such openings shall have a net area of not less than one square foot for each one hundred fifty square feet of under floor area. Openings shall be located as close to corners as practical and shall provide cross ventilation. The required area of such openings shall be approximately equally distributed along the length of at least two opposite sides. They shall be covered with corrosion-resistant wire mesh with openings of one-quarter in dimension.
- (3) Dryer vents and hot water tanks pressure relief valves shall exhaust on the exterior of the foundation fascia and point downward. The fascia for each section of a FAS shall have an opening of at least eighteen inches by twenty-four inches, with a cover of metal or pressure treated wood, to allow access to the crawl space. The foundation fascia shall be installed within thirty days after the FAS is occupied. (Statutory Authority: RCW 43.22.340 through 43.22.445.) 88-16-010 (Order 88-19), Section 296-150B-245, filed 9/9/88. Statutory Authority: RCW 43.22.350 and 43.22.440. 83-01-018 (Order 82.37), Section 296-150B-245, filed 12/6/82. Statutory Authority RCW 43.22.440. 82-09-059, Section (Order 82-12), 296-150B-245, filed 4/19/82.

The following instructions must be used for an initial or relocated manufactured home installation:

1. **Installation of a new manufactured home.**

- (a) The initial manufactured home installation must be conducted according to the manufacturer's instructions.
- (b) If the manufacturer's instructions do not address an aspect of the installation, you may request:
 - (i) Specific instructions from the manufacturer; or
 - (ii) Specific instructions from a professional engineer or architect licensed in Washington State.

For example: (A) A manufactured home is installed over a basement and the manufacturer's instructions do not address this application; (B) A manufactured home is installed on a site where the specific soil bearing capacity is not addressed in the manufacturer's instructions.
- (c) A manufactured home must be **anchored** per the manufacturer's installation instructions or per the design of a professional engineer or architect licensed in Washington State.
- (d) A manufactured home must have a skirting around its entire perimeter. It must be installed per the manufacturer's installation or if the manufacturer is not specific, to the standards in this section. It must be vented and allow access to the under floor area per the manufacturer's installation instructions or per the standards in subsection (3) of this section.
- (e) A manufactured home site must be prepared per the manufacturer's installation manual or per ANSI A225 .1, 1994 edition, section 3.
- (f) Heat duct crossovers must be installed per the manufacturer's installation instruction manual or per the standards in subsection (6) of this section.
- (g) Dryer vents must exhaust to the exterior side of the wall or skirting.
- (h) Hot water tank pressure relief lines must exhaust to the exterior side of the exterior wall or skirting and must exhaust downward.
- (i) Water piping must be protected against freezing as per the manufacturer's installation instructions or by use of a heat tape listed for use with manufactured homes and installed per the heat tape manufacturer's installation instructions.
- (g) The testing of water lines, waste lines, gas lines and electrical systems must be as per the manufacturer's installation instructions or per HUD standard CFR 3280.

2. **Relocation installation of a manufactured home.**

- (a) A relocated manufactured home installation should be conducted according to the manufacturer's instructions.
- (b) If the manufacturer's instructions are unavailable, you may use:
 - (i) The American National Standard Institute (ANSI) standard ANSI A225.1 Manufactured Homes Installation, 1994 edition instructions; or
 - (ii) The instructions of a professional engineer or architect licensed in Washington State.
- (c) A manufactured home must be **anchored** per the manufacturer's installation instructions. If the manufacturer's installation instructions are not available, you may use:
 - (i) The American National Standard Institute (ANSI) standard ANSI A225.1 Manufactured Homes Installation, 1994 edition instructions; or,
 - (ii) The instructions of a professional engineer or architect licensed in Washington State.

**Table 5-1 – Normal Home Installations
(Single- Or Multisection Homes)**

**Types Of Foundation Systems –
Main Components**

Piers—Ground anchors:

The manufactured home rests on piers of concrete block; formed-in-place concrete; permanent wood; or steel pedestals on permanent wood, crushed stone, or concrete footers. The ground anchors in the soil are angled to the resist straps or embedded in dead-men in the soil. Straps are tied to the frame, with or without over-the-top straps.

Concrete slab or continuous footings:

The manufactured home rests on a concrete slab or ribbons of concrete. The straps are tied between the frame and the perimeter footers or concrete slab.

Pile/post system:

The manufactured home rests on piles or posts placed sufficiently deep in the ground to resist all wind, snow, and earthquake forces. Straps fasten the home to the piles or posts or to caps placed thereon.

**Concrete, concrete block, or wood-
foundation, load-bearing, perimeter walls:**

The manufactured home rests on exterior load-bearing walls that sit on concrete or gravel footings. Straps fasten the home to the walls to resist all external forces.

**5.4 Cross-over connections for multisection
manufactured homes**

5.4.1 Utility cross-overs

Connect water, drainage, gas, electricity, and telephone utility cross-overs. The correct procedures are outlined in 8.

5.4.2 Duct-work cross-overs. Clamp the flexible air conditioning or heating ducts or both to the sleeves projecting through the bottom covering, seal the ducts' adjustable collars with several wrappings of duct tape, and suspend/support them above the ground (see figure 5-1).

5.5 Anchoring instructions

After blocking and leveling, the installer should secure the manufactured home against the wind, unless the jurisdiction permits otherwise. The type of installation is the determining factor in deciding how this should be done, as is described in the following sections.

5.5.1 Normal Installations

Table 5-1 summarizes and defines the types of normal installations. The pier-and-ground-anchor system, as provided in this standard, is most common. When using another type of installation, consult a registered engineer.

NOTE – The anchoring or foundation system shall be capable of meeting the loads required by the MHCSS.

5.5.1.1 Number and location of anchors

Select the number and location of straps and anchors from the chart and diagram in figure 5-2. Use either the single- or the double-strap method. Use only approved ground anchors capable of resisting at least the minimum loads given in the chart for the method selected.

5.5.1.2 Installation of anchors

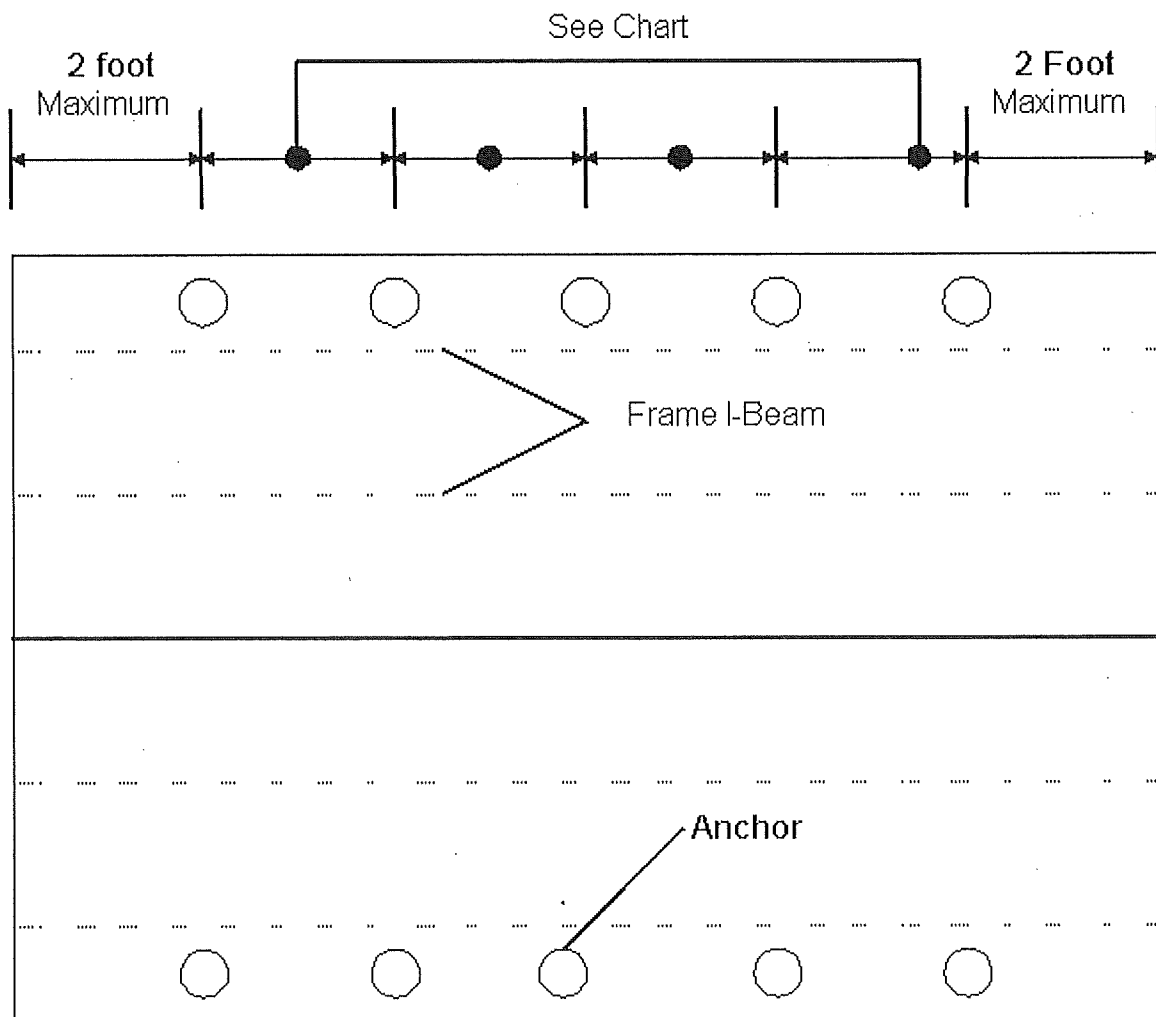
The following is one example: Install the anchors at the locations selected from figure 5-2 when the home manufacturer's installation instructions are not available. Follow the anchor manufacturer's instructions. Use single-headed anchors at all "frame-tie-only" locations when using the single-strap method, and double-headed anchors when employing the double-strap method. Install single- or double-headed anchors at all over-the-roof-tie locations. When using a single strap, line up the shaft of each anchor with its strap (see figure 5-3). When connecting more than one strap to a single anchor, line the shaft of the anchor with the results achieved by calculating the combined forces (see figures 5.4). The ground anchors must be sized for the direction of the load and the type of soil. (See figures 5.3 and 5.4 for additional information on the installation of anchors and tiedowns.)

Number and location of straps and ground anchors

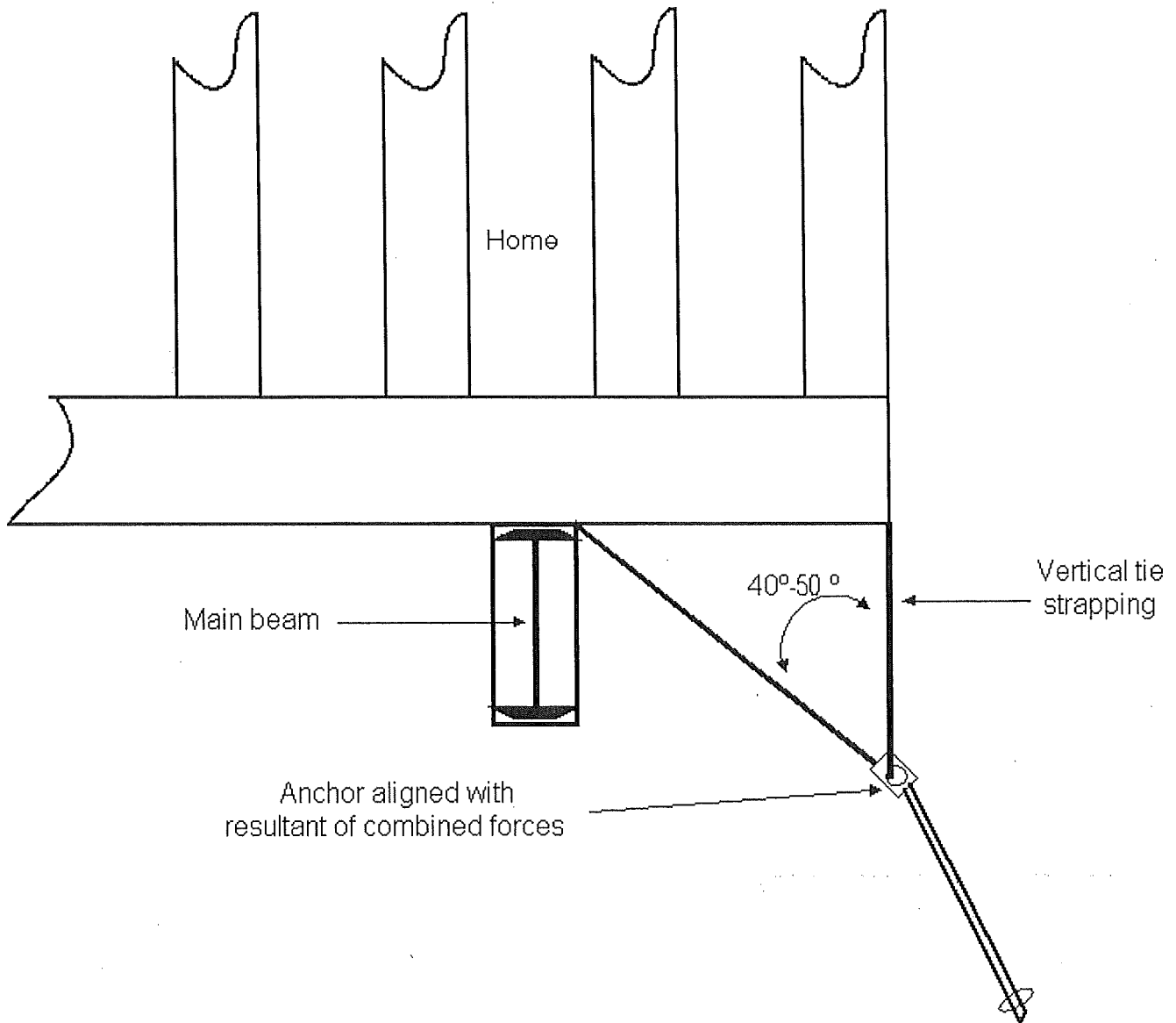
Strap Method	Anchor Minimum Ultimate Load Capacity	Minimum Anchor Spacing Zone 1
Single Strap	4725 lbs.	11'-0"
Double Strap	4725 lbs. ¹	11'-0" ²

Note -

1. Unless listed/labeled for a higher capacity by the anchor manufacturer
2. Unless a greater spacing is specified by the anchor manufacturer



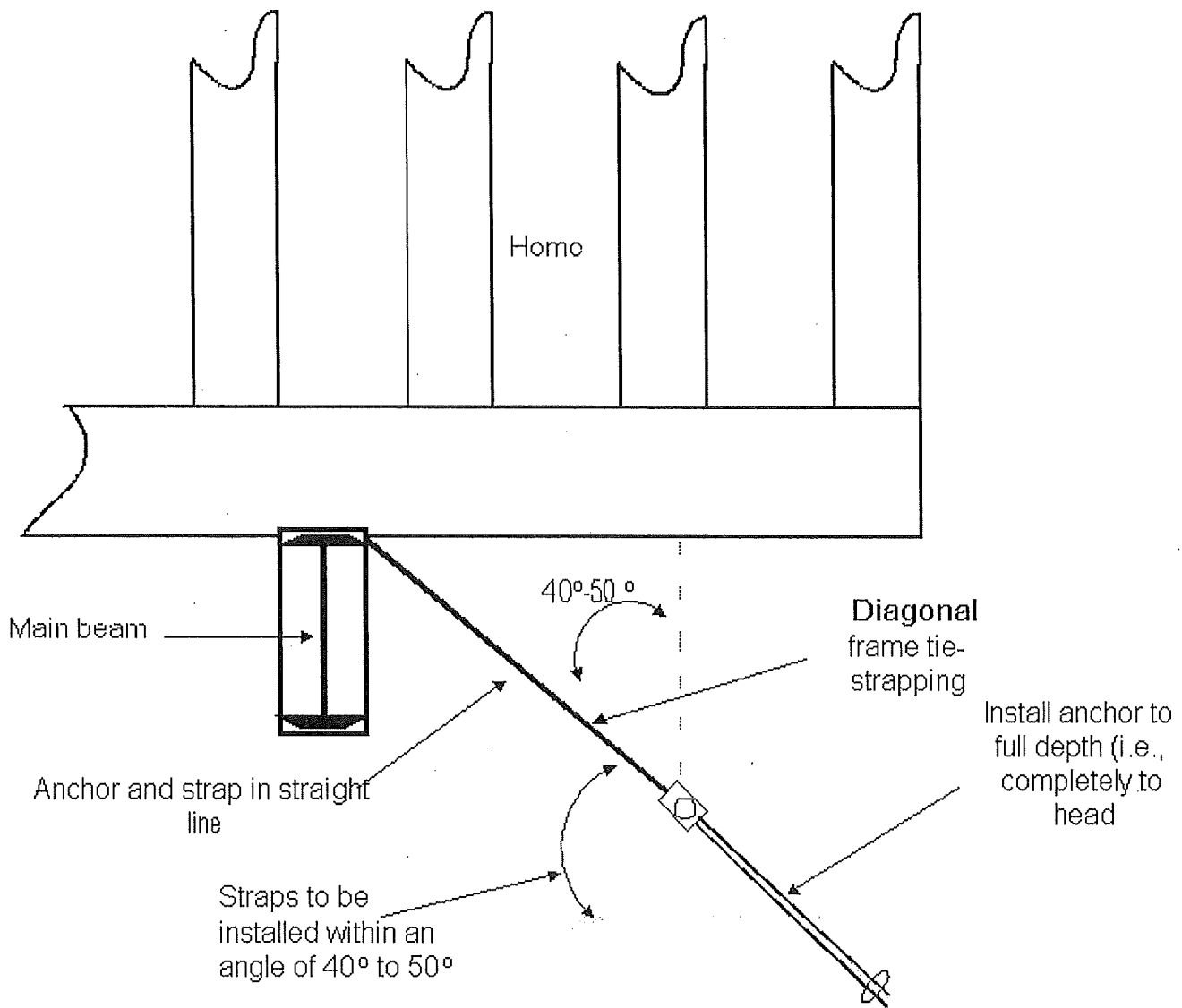
Diagonal and vertical ties



NOTE:

1. All anchoring parts must be certified to a 4,725 lb. capacity
2. The ground anchors must be sized in accordance with the direction of the load and the type of soil.
3. The ground anchors' augers must be installed below the frost line.
4. Ground anchors may be installed vertically if either a 10 inch x 18 inch (at a minimum) concrete collar or an approved metal stabilizing device is installed.

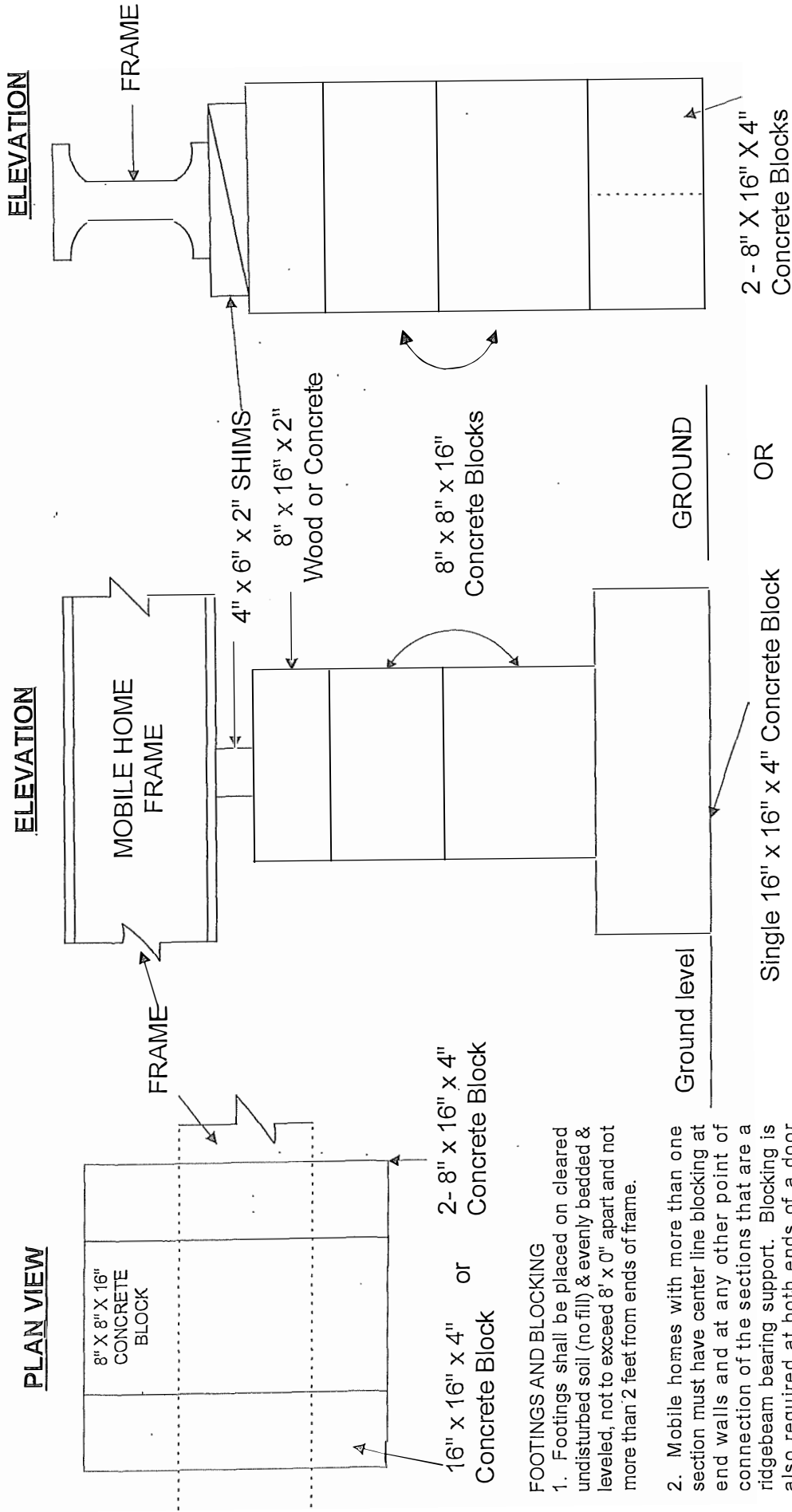
Diagonal ties



NOTE:

1. All anchoring parts must be certified to a 4,725 lb. capacity
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4. Ground anchors may be installed vertically if either a 10 inch x 18 inch (at a minimum) concrete collar or an approved metal stabilizing device is installed.

BENTON COUNTY BUILDING DIVISION



VENT OPENINGS: One (1) square foot per one hundred and fifty (150) square feet of underfloor space with 4 mil plastic ground cover required, or if within 3' of corners 1/1500.

STEPS: Steps shall be a minimum of 36" wide with 7 3/4" maximum rise and a minimum of 10" tread, secured properly. Four risers & over shall require a hand rail on each side which shall be 34" to 38" above the step nosing.

ACCESS DOOR: An 18" x 24" access door shall be provided to each section. If mobile home is at ground level, the door shall be installed with an area well.

WATER LINE: Shall be insulated from floor level to 2 feet below ground with shut off valve.

TIE DOWNS: Tie downs are required. See reference page in this handout.

SKIRTING: Skirting shall be approved exterior material. The wood used for skirting shall be at least 3 inches from the ground unless it is pressure treated.

- FOOTINGS AND BLOCKING**
1. Footings shall be placed on cleared undisturbed soil (no fill) & evenly bedded & leveled, not to exceed 8' x 0" apart and not more than 2 feet from ends of frame.
 2. Mobile homes with more than one section must have center line blocking at end walls and at any other point of connection of the sections that are a ridgebeam bearing support. Blocking is also required at both ends of a door opening that is 6 feet or more wide in an exterior wall.
 3. All blocks shall be set with the cores placed vertically.
 4. Wood Plates and shims must be of hem-fir 3" from the ground unless it is pressure Douglas fir, or spruce pine fir. A shim shall be at least 4 in, wide & 6 in. long and not more than 2 inches thick.

Steve Becken
Manager

Area Code 509
Prosser 786-5611
Tri-Cities 736-3084
Ext. 5664
Fax 786-5627

Benton County

Department of Public Works

Post Office Box 1001 - Courthouse
Prosser WA 99350-0954

June 12, 2001

TO: All Mobile Home Sales
All Mobile Home Transporters

From: Norm Childress
Traffic Engineer

RE: Oversize Load Permits

In order to secure an oversize load-moving permit Benton county requires two (2) business days notice prior to the date of transport. This allows our staff time to evaluate the route proposed.

Should weather conditions prohibit transporting on the original dates, adjustments will be made.

Authorized loads will be permitted Monday through Thursday during daylight hours only. On Friday, loads under ten (10) feet wide will be allowed from daylight to 4:00 p.m. Transporting loads over ten (10) feet wide will be allowed on Friday from daylight to 2:00 p.m.

Benton County does not permit movement of oversized loads on County roads on Saturday, Sunday or Holidays.

The moving permit includes the owner's name, size of the load, and license number of the towing vehicle.

This policy is strictly enforced.

Norman W. Childress,
Traffic Engineer

****FOR STANDARD MAIL BOX PLANS ASK FOR HANDOUT****

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.

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.

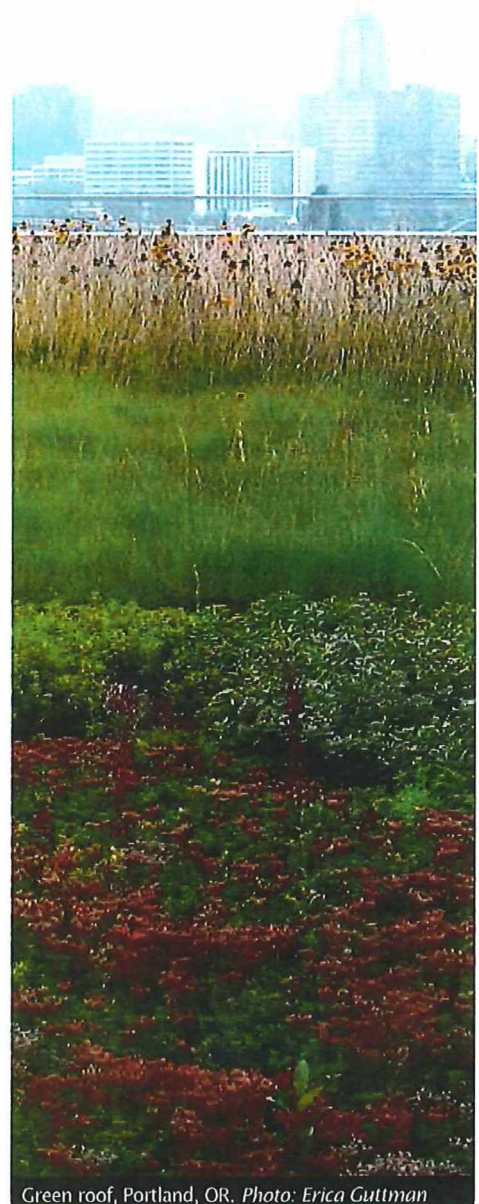
Vegetation Preservation and Restoration

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.

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



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.

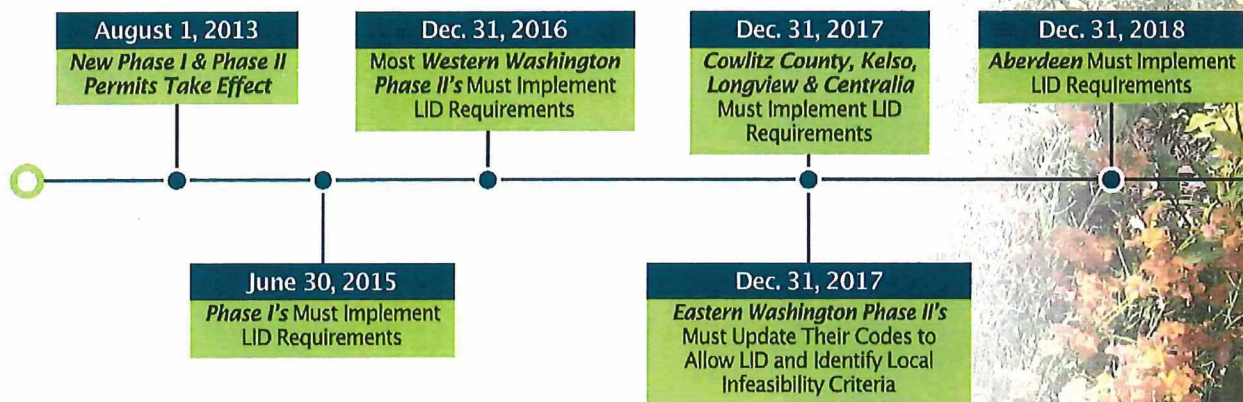
Look for the other helpful fact sheets in this series:

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

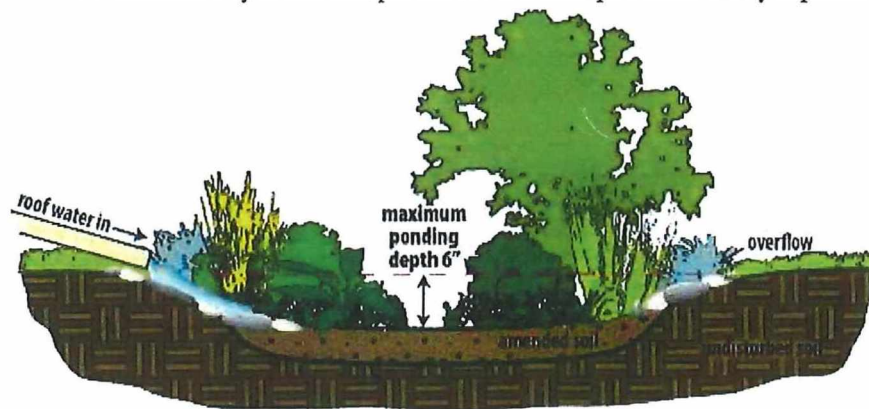
Healthy soil grows healthier plants, allows stormwater to soak in, stores water for plants in the summer, and reduces the need for chemicals such as pesticides and fertilizers.

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

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.



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.



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

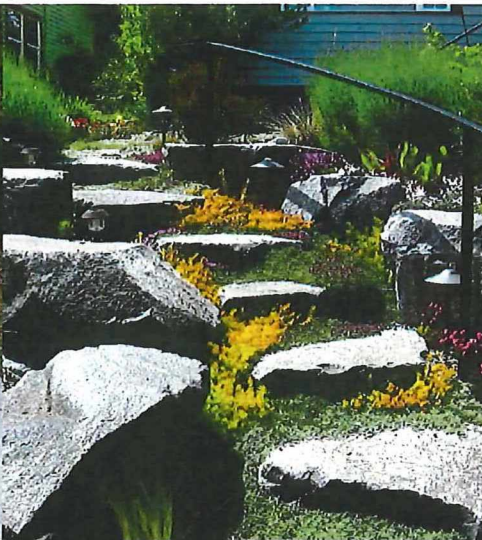


A rain garden is an attractive way to manage polluted runoff on site. Photo: Erica Guttman



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.

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.

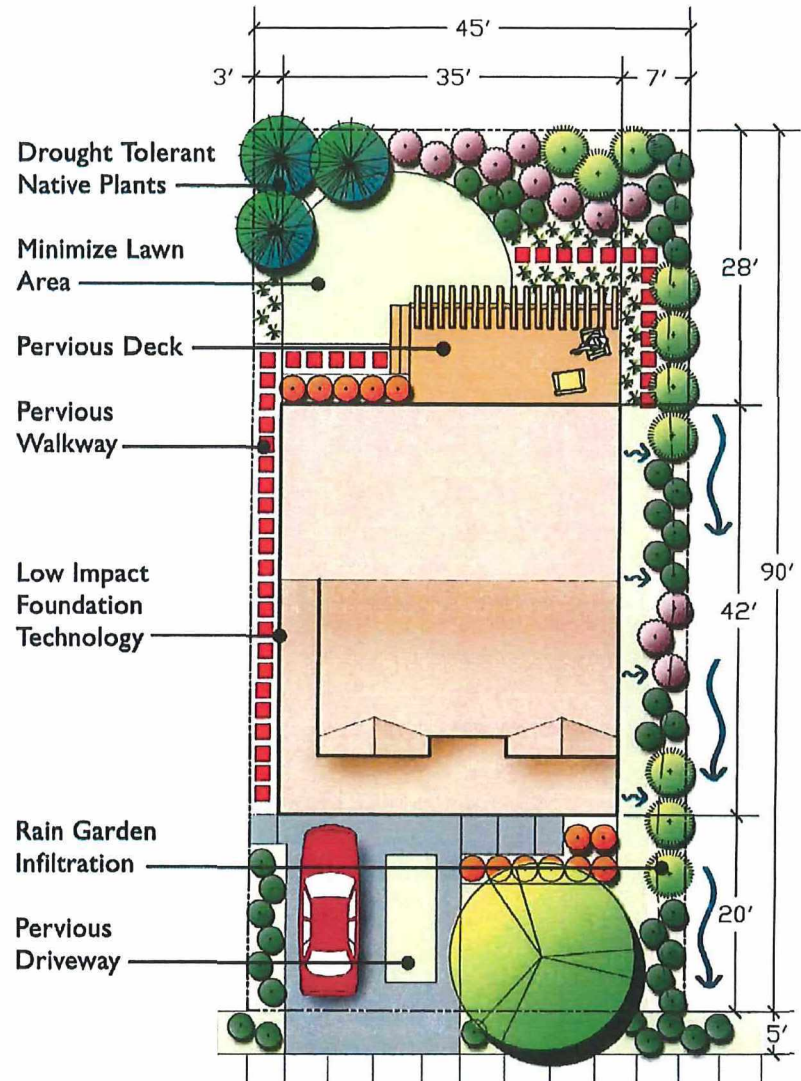


Photo: PIN Foundations



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.



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



WASHINGTON STATE UNIVERSITY
EXTENSION



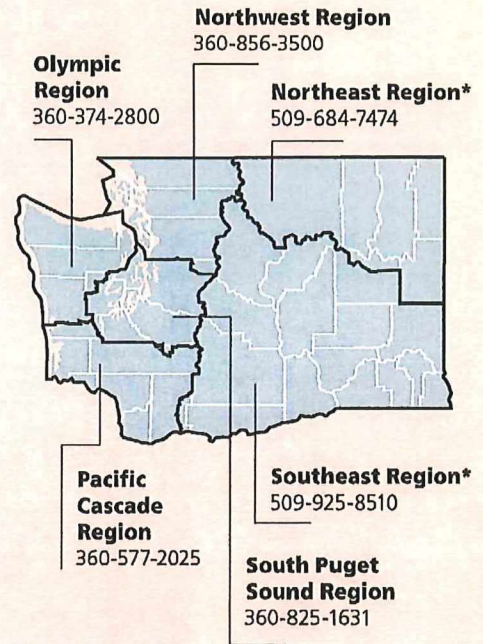
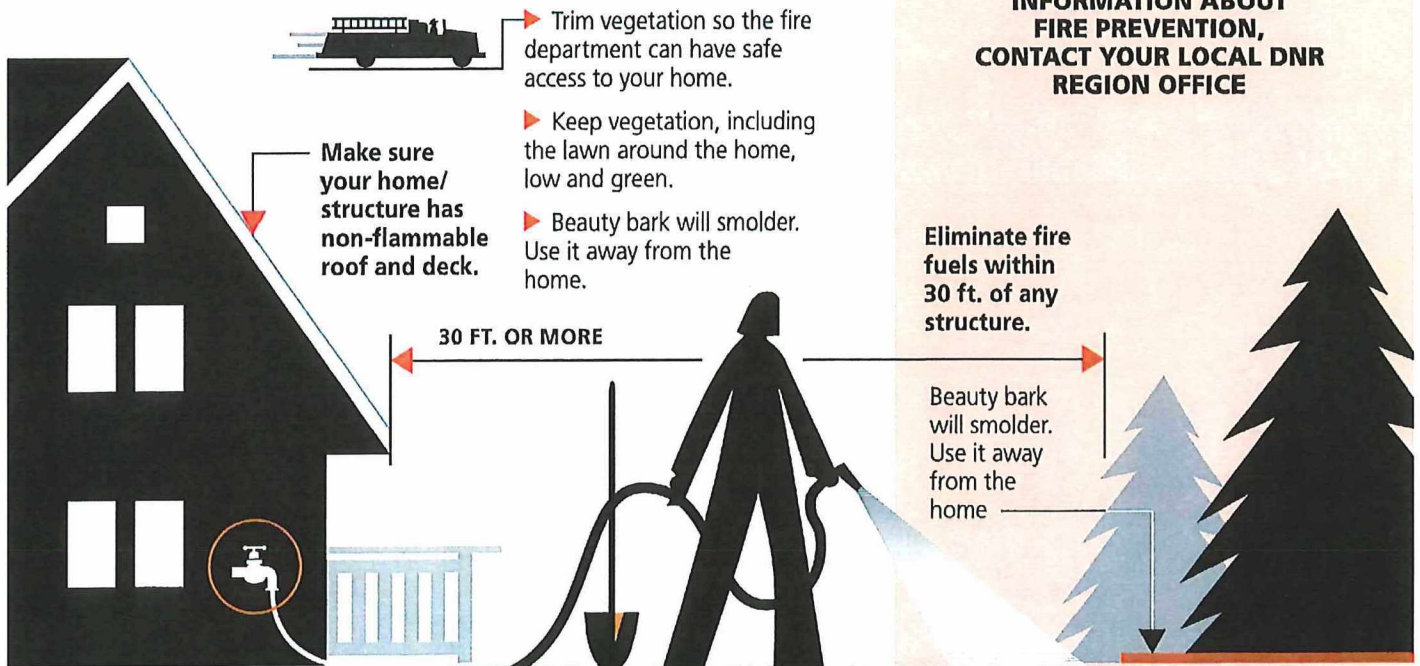
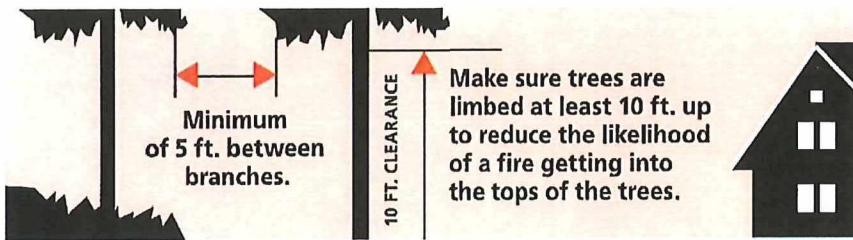
WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

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.



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



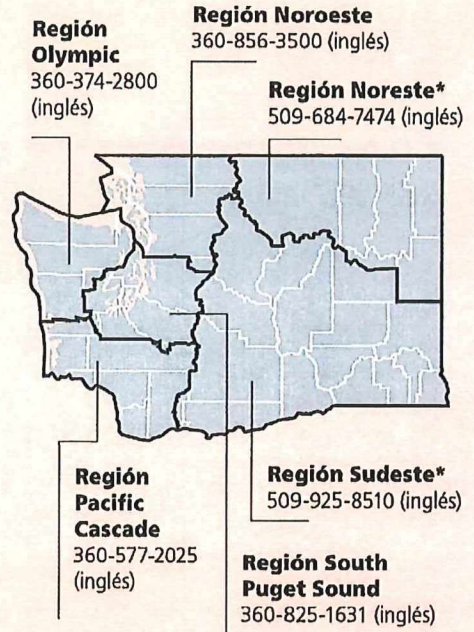
WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

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.



- ▶ Recorte el césped y vegetación para que los bomberos puedan llegar a su casa sin problemas.
- ▶ Mantenga la vegetación y césped alrededor de su casa bien cortado y verde.
- ▶ No use material orgánico (hojas, partículas de corteza (beauty bark), paja, etc.) cerca de su casa. Éstos arden fácilmente.

Asegúrese que su casa ó estructura tiene patio y techo anti-inflamable.

30 PIES (9 M.) O MÁS DISTANCIA DE ESPACIO LIBRE

Elimine materiales combustibles dentro de 30 pies (9 metros) de cualquier estructura.

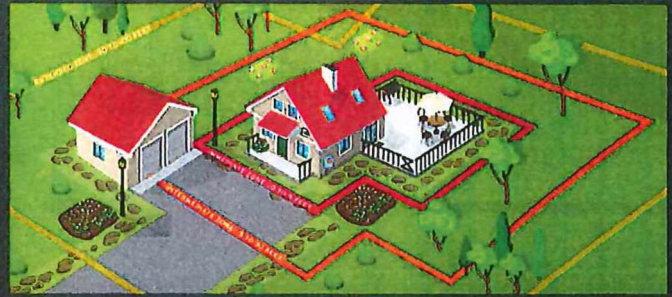
No use material orgánico (hojas, partículas de corteza (beauty bark), paja, etc.) cerca de su casa. Éstos arden fácilmente.

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.

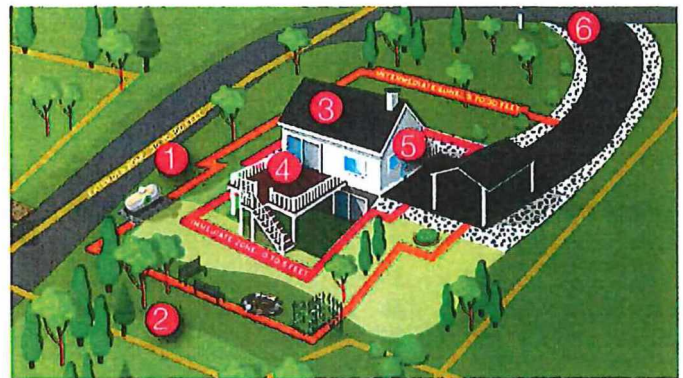
6. EMERGENCY RESPONDER ACCESS

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.



FIREWISE USA™
RESIDENTS REDUCING WILDFIRE RISKS

VISIT FIREWISE.ORG FOR MORE DETAILS

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