

Building a One or Two-Family Home in Wisconsin

- If applicable, you will need to obtain a **sanitary permit**, a **driveway permit**, and a **zoning permit** as required by your local municipality or county before a building permit can be issued; a copy of these permits will need to be submitted to the building inspector **prior** to a building permit being issued.
- Complete the latest version (R.6/10) of the **Wisconsin Uniform Building Permit Application** (attached) and return to the building inspector.
- Submit an **Erosion Control Plan** showing the locations of erosion control measures to be taken for sediment control, the location of the tracking pad for driveway access, and the locations of temporary soil storage piles. A copy of the Site Plan with the additional erosion control information may be used for the Erosion Control Plan.
- Submit your **Energy Calculations** to the building inspector; you may use the 2009 IECC to calculate this number. This software can be downloaded for free at www.energycodes.gov. If you are uncertain how to obtain this calculation, please refer to your HVAC contractor.
- Plan Submittal (Two Sets)**
At least **two** sets of plans for all one and two-family dwellings need to be submitted to the building inspector for examination and approval at the time the **Wisconsin Uniform Building Permit** application is submitted. The required building plans must be legible and drawn to scale or dimensioned and must include **ALL** of the following:

Site Plan must show all of the following:

- The location of the dwelling and other buildings, wells, surface waters and dispersal systems on the site with respect to property lines and surface waters adjacent to the site.
- The areas of land-disturbing construction activity and the location of all erosion and sediment control measures to be employed in order to comply with SPS 321.125.
- The pre-construction ground surface slope and direction of runoff flow within the proposed areas of land disturbance.

Floor Plan must be provided for each floor and must show all of the following:

- The size and location of all rooms, doors, windows, structural features, exit passageways and stairs.
- The use of each room.
- The location of plumbing fixtures, chimneys, heating and cooling appliances and a heating distribution layout.
- The location and construction details of the braced wall lines.

Elevations must show all of the following:

- The exterior appearance of the building, including the type of exterior materials.
- The location, size and configuration of doors, windows, roof, chimneys, exterior grade, footings and foundation walls.

Storm Water Management Plan:

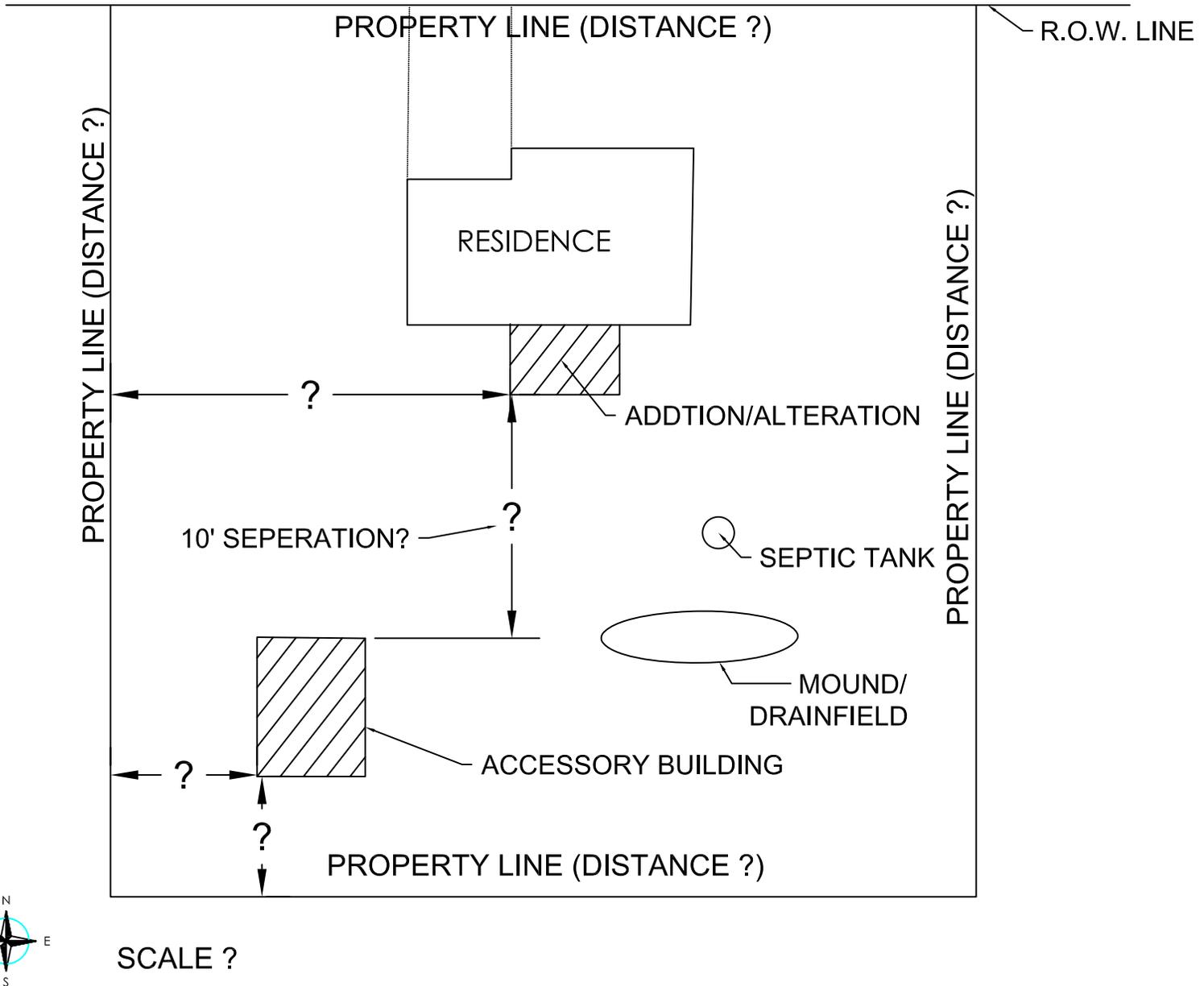
- Must be prepared for a site where one acre or more of land will be disturbed.
- Must delineate and describe the post-construction storm water management practices to be employed to comply with SPS 321.126.

All above Listed Materials MUST be Submitted PRIOR to the Issuance of a Building Permit

SAMPLE SITE PLAN

Show location of all lot lines and their dimensions. Show location and dimensions of all proposed buildings to be served by septic systems, show the location and dimensions of both the primary and alternate drainfield areas. For alterations or additions to existing buildings served by a septic system, show location of drainfield or if the location is not know, show the location of the vent pipe. Show scale used and the north location.

Center of Right of Way (Not Center of Pavement)





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Wisconsin Chapter

ELECTRICAL LICENSING GUIDE

Wisconsin's New Law

Many of the recent changes to Wisconsin's electrical licensing law were established by legislation passed in March of 2008. In addition to requiring statewide licensing, this legislation provided for a 5-year delayed effective date (April 1, 2013) to give people time to get the credentials required by the 2008 law.

The Important Facts You Need to Know

How ABC Can Help You

ABC of Wisconsin Electrical Exam Preparation Training –

Starting April 2, 2014. This is a review course to prepare for the Wisconsin Journeyman and Masters electrical exams. See www.abcwi.org for more information.

- **Effective April 1, 2014** - Everyone (with certain exceptions) working as an electrician or in business as an electrical contractor will need to be licensed or registered with the Wisconsin Department of Safety and Professional Services (DPS).
- **Electricians** - If you have a current DPS electrical credential (i.e. Master license, Journeyman license, Apprentice or Beginning Electrician registration) you will be in compliance with the new law.
- **Apprentices** - If you are an active apprentice in a registered apprenticeship program, and have a current DPS electrical credential (i.e. Apprentice or Beginning Electrician registration), you will be in compliance with the new law.
- **Electrical Contractor** - If you have a current Electrical Contractor license and you are or employ a Master Electrician, you will be in compliance with the new law. If you are not a Master Electrician or do not employ a Master electrician, you will need to meet this requirement in order to be an Electrical Contractor.
- **No DPS Credential** – If you do not have a current DPS credential, you will need to either obtain a Master Electrician license, Journeyman license, or register as a Beginning Electrician. Beginning Electricians will be “converted” to Registered Electricians in the future.
- **Exemptions** - Many types of “electrical work” are exempt from the licensing requirement.
- **Grandfathering** - There is a very limited grandfathering clause affecting only individuals born before January 1, 1956.
- **Further Details** - Many “details” not addressed in the law will be established by Administrative Rules. The Administrative Rules have not yet been approved.



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Legislative Changes Began in 2008

Many of the recent changes to Wisconsin's electrical licensing law were established by legislation passed in March of 2008. In addition to requiring statewide licensing, this legislation provided for a 5-year delayed effective date (April 1, 2013) to give people time to get the credentials required by the 2008 law.

As the effective date approached, some of those regulated by the new law raised concerns and in March of 2013 the legislature pushed back the effective date of the legislation another year (April 1, 2014) in order to consider changes. In February of 2014 the legislature passed new legislation making several changes to the 2008 law but keeping the effective date of April 1, 2014.

Now, under provisions that will become law on **April 1, 2014**, no person may **work as an electrician**, and no personⁱ may **engage in business** as an electrical contractor, unless that person is licensed by, or registered with, the Department of Safety and Professional Services.

Credentialing Requirements Effective April 1, 2014

| | |
|---|--|
| Electrical Contractor | <ul style="list-style-type: none"> ✓ No person may engage in the business of installing, repairing, or maintaining electrical wiring unless the person is licensed as an electrical contractor by the department of safety and professional services. ✓ No person who is not a master electrician may install, repair, or, maintain electrical wiring unless a master electrician is at all times responsible for the persons work. |
| Master Electricians | <p>At least one of the following:</p> <ul style="list-style-type: none"> ✓ A bachelor's degree or master's degree in electrical engineering, followed by passage of an examination. ✓ 12 months of experience as a journeyman electrician, followed by passage of an examination. ✓ 60 months, with at least 10,000 hours experience, followed by passage of an examination. |
| Journeyman Electricians | <p>At least one of the following:</p> <ul style="list-style-type: none"> ✓ Completion of a construction electrician apprenticeship program lasting at least 3 yearsⁱⁱ and that is approved by the U.S. department of labor or the department of workforce development, followed by passage of an examination. ✓ 48 months, with at least 8,000 hours experience, followed by passage of an examination (completion of a 2-year approved program shall be equivalent to 12 months and 2,000 hours of experience). |
| Apprentice Electricians | <ul style="list-style-type: none"> ✓ The department of safety and professional services must promulgate rules for the registration of electrical apprentices. |
| Registered Electricians (formerly Beginning Electricians) | <ul style="list-style-type: none"> ✓ The department of safety and professional services must promulgate rules that establish procedures for the enrollment of registered electricians. ✓ Registered electricians must be supervised by licensed journeyman or master electricians. ✓ The department must promulgate rules to differentiate the scope of installation, repair, or maintenance of electrical wiring that may be performed by registered electricians. |
| Grandfathering | <ul style="list-style-type: none"> ✓ Persons born on or before January 1, 1956 and who have at least 15 years of experience in installing, repairing, or maintaining electrical wiring will be regulated under separate rules to be developed. ✓ It is generally presumed that these individual will not be required to pass an examination and may be limited by other restriction. |



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Exemptions to Wisconsin's Electrical Licensing Law

1. A residential property owner who installs, repairs, or maintains electrical wiring on premises that the property owner owns and occupies as a residence, unless a license or registration issued by the department is required by local ordinance.
2. A person engaged in maintaining or repairing electrical wiring within an existing facility or on premises owned or leased by the person or by an entity for which the person is an agent or employee.
3. A person engaged in installing, repairing, or maintaining electrical wiring, apparatus, or equipment for elevators and escalators.
4. A person engaged in installing, repairing, or maintaining equipment or systems that operate at 100 volts or less.
5. A person engaged in installing, repairing, or maintaining an electronic system designed to monitor a premise for the presence of an emergency, to issue an alarm for an emergency, or to detect and summon aid for an emergency.
6. A person engaged in installing, repairing, or maintaining electrical wiring of facilities that support telecommunication services that is provided by a telecommunications provider.
7. A person engaged in installing, repairing, or maintaining manufactured equipment or utilization equipment, including ballasts, electric signs and luminaries or any other manufactured system that is designed to provide a function that is not primarily electrical in nature if the installation, repair, or maintenance does not involve the modification or installation of branch circuit conductors that are external to the manufactured or utilization equipment or other manufactured system.
8. A person engaged in installing electrical wiring for components of a manufactured home or a manufactured building, while the manufactured home or the manufactured building is at or in the facility at which it is being manufactured.
9. A person employed by an electricity provider, or a subcontractor of an electricity provider, who installs, repairs, or maintains electrical wiring for equipment that is installed in the normal course of providing utility services by the electricity provider.
10. A person engaged in installing, repairing, or maintaining electrical wiring that provides lighting or signals for public thoroughfares and for public airports.
11. A person engaged in installing, repairing, or maintaining electric lines on the utility side of substations and other distribution facilities owned or operated by customers or members of electricity providers.
12. A person employed by an electricity provider, or a subcontractor of an electricity provider, who installs, repairs, or maintains primary voltage electric facilities that are owned by the electricity provider's customers or members and that operate at greater than 600 volts.
13. A person employed by an electricity provider, or a subcontractor of an electricity provider, who restores service during an emergency.
14. A person who installs a replacement for an existing switch or outlet, if the replacement switch or outlet has a rating of not more than 20 amperes.
15. A person engaged in installing electrical wiring within an existing industrial facility or existing manufacturing facility owned or leased by the person or by an entity for which the person is an agent or employee.
16. A person who installs electrical wiring without receiving payment in a new one or two family dwelling that is being constructed by a qualified nonprofit corporation.

Municipal Authority

Municipal licenses and registrations issued to electricians, electrical contractors, and electrical inspectors are no longer valid (or required) as of March 31, 2014. Municipalities may no longer impose any registration, licensing, or certification requirements on electrical contractors, electricians, or electrical inspectors. And no person may work as an electrician, and no person may engage in business as an electrical contractor, unless that person is licensed by, or registered with, the Department of Safety and Professional Services.

Reciprocity

Many of the most recent changes were intended to facilitate reciprocal agreements with neighboring states. The 2014 legislation allows the department to enter into reciprocal agreements with other states provided the credentials are comparable, the individual submits an application, and pays the fee. It is presumed the department will begin to negotiate such agreements.



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Topics to be Further Defined in Administrative Rules

Inspections

- ✓ Current law requires the department to establish rules for the inspection of electrical wiring.
- ✓ This legislation prohibits the department from requiring inspection of electrical wiring in an existing industrial facility unless the project required plan review.
- ✓ Under the bill, all inspections shall be performed by inspectors certified by the department.
- ✓ Promulgate rules that establish criteria for the certification of electrical inspectors.

Registered electricians and electrical apprentices

- ✓ Promulgate rules that establish criteria for the enrollment of registered electrician and the registration of electrical apprentices.
- ✓ Promulgate rules that establish requirements for the supervision of registered electricians.

Registration and licensing procedure

- ✓ Promulgate rules that establish the procedures for the licensing of journeyman electricians and master electricians.

Suspension or revocation

- ✓ Establish criteria and a process for the suspension and revocation of registrations and licenses.

Types of electricians

- ✓ The department may promulgate rules that recognize and regulate different types and subtypes of electricians.

Scope of work

- ✓ Promulgate rules to differentiate the scope of installation, repair, or maintenance that may be performed by electrical contractors, registered electricians, journeyman electricians, master electricians, and any additional type of electrician created in rules.

Continuing Education

- ✓ Continuing Education requirements for all types of electricians will be defined in Administrative Rule.

Additional Resources

- For Master or Journeyman electrician exam locations check the Department of Safety and Professional Services website (www.dsps.wi.gov).
- If you are unable to schedule an exam before April 1, 2014, register as a "Beginning Electrician" on the DSPS website (www.dsps.wi.gov).
- ABC of Wisconsin has Electrical Exam Preparation training (Master and Journeyman) scheduled starting on April 2nd and concluding on May 21st. Visit www.abcwi.org and click on the "events" tab for more details. For more information contact Elizabeth Roddy at 608-244-6050 or eroddy@abcwi.org.
- For questions about this document contact: John Mielke at 608-244-5883 or jmielke@abcwi.org.

This guide is intended to be a summary of the major provisions of Wisconsin's electrical licensing laws. For actual languageⁱⁱⁱ refer to Wisconsin State Statute Ch. 101 and Wisconsin Administrative Rule SPS 305.40.

ⁱⁱⁱ See "Exemptions to Wisconsin's Electrical Licensing Laws"

The actual length of approved apprenticeship programs is determined by either the Wisconsin Bureau of Apprenticeship Standard or the U.S. Department of Labor Websites and printed material may not yet be updated to reflect changes in law and Administrative Rule resulting in confusing or seemingly contradictory information.

Associated Builders and Contractors of Wisconsin, Inc.

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UDC Wall Bracing Provisions

Permanent Rule effective September 1, 2014

A 'How To' guide for use of the new provisions

Summary: Forget what you knew about the previous wall bracing provisions – this method is a different concept. The provisions are generally based on the 2012 IRC Simplified Wall Bracing Provisions. The new prescriptive Tables provide the number of braced wall panels required on a rectangle side (intermittent sheathing method) OR the total length of braced wall panels required on a rectangle side (continuously sheathed method) in wood frame walls parallel to the wind direction being considered.

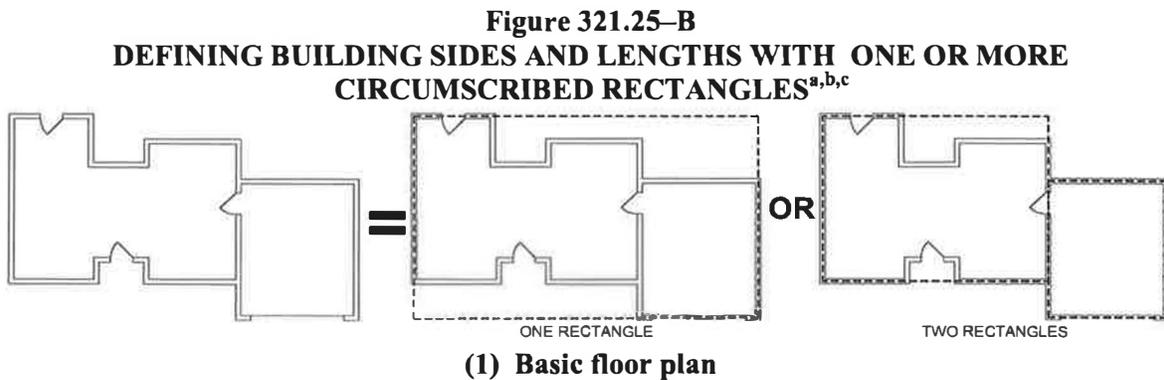
What hasn't changed? Generally the bracing materials and fastening in Table 321.25-G remain unchanged.

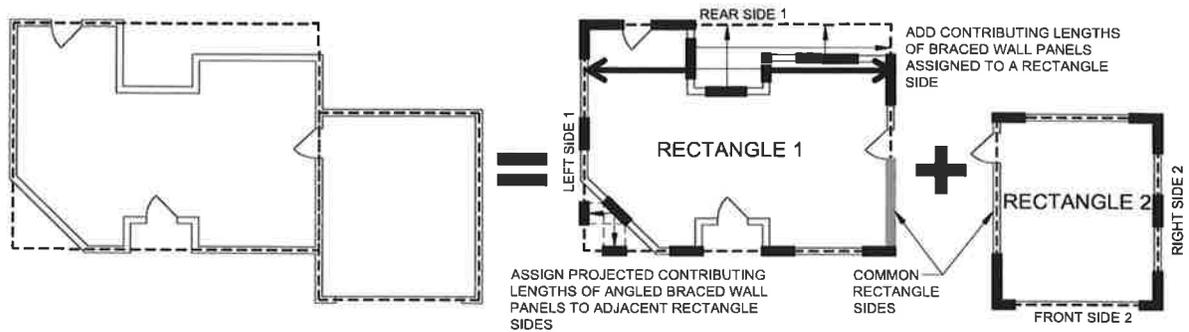
Major Assumptions/Defaults:

- Interior side of exterior walls are sheathed with ½" gypsum board
- 10' wall heights
- Wind Exposure category B
- For the intermittent bracing method roof eave (top of wall) to ridge height is 10'

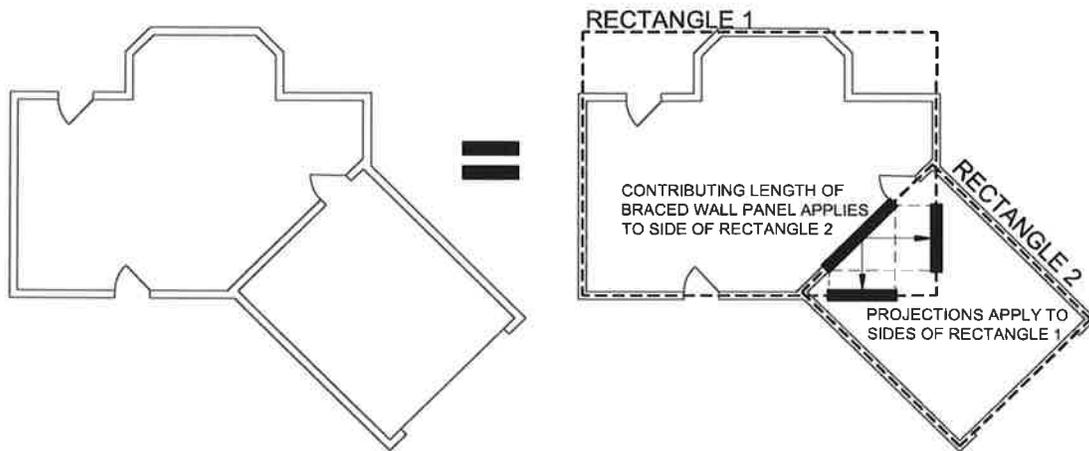
Starting with the topmost floor level ...

STEP 1: Define the rectangle sides by circumscribing the outermost extents of the building at each floor level with a rectangle. The maximum length of any side of the rectangle is 75' for intermittent bracing and 80' for continuously sheathed bracing. For either method the maximum length to width ratio of the rectangle is 3:1. If the length of the rectangle side exceeds the prescriptive limit of the respective table or the length to width ratio exceeds 3:1 the building must be circumscribed or divided with more than one rectangle or designed by engineering analysis. See examples below from the rules - Figure 321.25-B.





(2) Angled-building-side plan^d



(3) Angled floor plan^e

^aEach floor plan level shall be circumscribed with one or more rectangles around the entire floor plan at the floor level under consideration as shown. When multiple rectangles are used, each side shall be braced as though it were a separate building and the bracing amount added together along the common wall where adjacent rectangles overlap or abut.

^bRectangles shall surround all enclosed plan offsets and projections. Chimneys, partial height projections, and open structures, such as carports and decks, shall be excluded from the rectangle.

^cEach rectangle shall have a maximum rectangle length-to-width ratio of 3:1.

^dProjected contributing lengths of angled braced wall panels shall be assigned to the closest rectangle sides, as shown for the angled corner in the angled-building-side-plan shown above.

^eBraced wall panels located on a common wall where angled rectangles intersect, as shown in Figure 321.25-B(3), shall have their contributing length applied towards the required length of bracing for the parallel rectangle side and its projected contributing lengths towards the adjacent angled rectangle sides. Where the common side of rectangle 2 as shown in Figure 321.25-B(3) has no physical wall, the portion shall be designed in accordance with s. SPS 321.25 (8) (a).

STEP 2: Select the wall bracing method (intermittent or continuous), materials, and panel width (intermittent method) from Table 321.25-G. If using intermittent braced wall panels, in general most of the bracing methods are considered equivalent and the method simply tells you the NUMBER of panels required on a rectangle side. For continuously sheathed bracing the method yields the total LENGTH of braced wall required on a rectangle side.

| | | | | | |
|--|---|-----|--------------------------|--------------------------|--------------------------|
| | 7/16" for maximum 24" o.c. stud spacing | | | | |
| CS-SFB ^d Continuous sheathed SFB | 1/2" for maximum 16" o.c. stud spacing | | | Same as SFB | Same as SFB |
| Narrow Panel Bracing | | | | | |
| PF Portal frame | 7/16" | 12' | Refer to Figure 321.25-A | Refer to Figure 321.25-A | Refer to Figure 321.25-A |

^aThe interior side of all exterior walls shall be sheathed with minimum 1/2-inch gypsum wallboard unless otherwise permitted to be excluded by this subsection. All edges of panel-type wall bracing, except horizontal joints in GB bracing, shall be attached to framing or blocking.

^bThe actual measured wall height shall include stud height and thickness of top and bottom plates. The actual wall height shall be permitted to exceed the listed nominal values by not more than 4 1/2 inches. Tabulated bracing amounts in s. SPS 321.25 (8) (c) are based on a 10-foot nominal wall height for all bracing methods and shall be permitted to be adjusted to other nominal wall heights not exceeding 12 feet in accordance with footnotes to Table 321.25-I or Table 321.25-J.

^cLIB is not permitted for walls supporting a roof and two floors. Two LIB braces installed at a 60° angle from horizontal shall be permitted to be substituted for each 45° angle LIB brace.

^dBracing with CS-WSP and CS-SFB shall have sheathing installed on all sheathable surfaces above, below, and between wall openings.

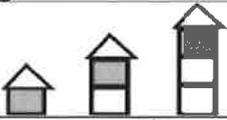
^eShall be attached to the top and bottom plates and any intermediate studs, in one continuous length.

^fEach braced panel may contain no more than one hole, having a maximum dimension of no more than ten percent of the least dimension of the panel, and confined to the middle three-fourths of the panel.

STEP 3: DETERMINE NUMBER OF PANELS OR REQUIRED TOTAL LENGTH OF BRACING REQUIRED USING ONE OF THE FOLLOWING METHODS

- A) Intermittent braced wall panels. Determine the NUMBER of braced panels required on each rectangle side using Table 321.25-I based on the length of the perpendicular side. NOTE a minimum of 2 braced wall panels is required on each rectangle side.

Table 321.25-I
REQUIRED NUMBER OF INTERMITTENT BRACED WALL PANELS
ON WALLS PARALLEL TO EACH RECTANGLE SIDE
AT EACH FLOOR LEVEL^{a,b,c,d,e,f, h}

| Wall Supporting: | | Required Number of Brace Panels on a Building Side | | |
|-----------------------------|---|--|-----|-----|
| | | Length of Perpendicular Side (feet) ^g | | |
| | | ≤25 | ≤50 | ≤75 |
| Roof and ceiling only |  | 1 ⁱ | 2 | 3 |
| One floor, roof and ceiling |  | 2 | 4 | 6 |

| | | | | |
|------------------------------|---|---|---|---|
| Two floors, roof and ceiling |  | 3 | 6 | 9 |
|------------------------------|---|---|---|---|

^aInterpolation is permitted. Extrapolation to buildings larger than addressed in this table is prohibited.

^bThis table applies to wind exposure category B. For wind exposure category C or D, multiply the number of braced wall panels required by 1.3 or 1.6, respectively.

Wind exposure category B is comprised of urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. Exposure B shall be assumed unless the site meets the definition of another type exposure.

Wind exposure category C is comprised of flat, open country and grasslands with scattered obstructions, including surface undulations or other irregularities, having heights generally less than 30 feet extending more than 1,500 feet from the building site in any quadrant. This exposure also applies to any building located within Exposure B type terrain where the building is directly adjacent to open areas of Exposure C type terrain in any quadrant for a distance of more than 600 feet.

Wind exposure category D is comprised of flat, unobstructed areas exposed to wind flowing over open water for a distance of at least 1 mile. This exposure applies only to those buildings and other structures exposed to the wind coming from over the water. Exposure D extends inland from the shoreline a distance of 1,500 feet or 10 times the height of the building or structure, whichever is greater.

^cTabulated values are based on a nominal wall height of 10 feet. For nominal wall heights other than 10 feet and not more than 12 feet, multiply the required number of brace panels by the following factors: 0.9 for 8 feet, 0.95 for 9 feet, 1.15 for 11 feet, or 1.3 for 12 feet.

^dTabulated values are based on a roof with a top-of-wall-to-ridge height of 10 feet. For top-of-wall-to-ridge heights other than 10 feet, multiply the required number of brace panels by the following factors for each floor level support condition:

Roof only – 0.7 for 5 feet, 1.3 for 15 feet, or 1.6 for 20 feet

Roof + 1 Floor – 0.85 for 5 feet, 1.15 for 15 feet, or 1.3 for 20 feet

Roof + 2 Floors – 0.9 for 5 feet or 1.1 for 15 feet.

^eWhere minimum ½-inch gypsum wallboard is not included on the interior side of the wall, multiply the number of braced wall panels by 1.7 for LIB bracing or 1.4 for all other bracing methods, except this increase is not required for the portal frame method.

^fAdjustments in footnotes b to e apply cumulatively. Fractions of panels shall be rounded to the nearest one-half braced wall panel.

^gPerpendicular sides to the front and rear sides are the left and right sides. Perpendicular sides to the left and right sides are the front and rear sides. See Figure 321.25-B.

^hThe following braced wall panel conditions shall be permitted to be counted as one-half a braced wall panel toward meeting the required number of panels: (1) one 60 degree LIB; (2) one 48" GB or one 96" GB with gypsum wallboard on one side; (3) one 36" WSP or SFB braced wall panel for wall heights not more than 9 feet; (4) a 48" WSP or SFB braced wall panel where there is no more than one unblocked horizontal joint; or (5) one PF brace panel complying with Figure 321.25-A.

ⁱThis value of less than 2 serves only as the beginning value for calculation purposes. The resulting value shall be 2 or greater, to be consistent with subd. 2.

OR

- B) Continuously Sheathed braced walls. Determine the TOTAL LENGTH of braced wall panels on each rectangle side using Table 321.25-J based on the length of the perpendicular side.

Table 321.25-J
REQUIRED LENGTH OF CONTINUOUS BRACING ON WALLS PARALLEL TO
EACH RECTANGLE SIDE AT EACH FLOOR LEVEL ^{a,b,c,d,e,g,h}

| Top-of-Wall-to-Ridge | Wall Supporting: | Total Required Length (feet) of Full-Height Bracing on Any Side of Rectangle |
|-----------------------------|-------------------------|---|
|-----------------------------|-------------------------|---|

| Height (feet) | | | Length of Perpendicular Side (feet) ^f | | | | | | | |
|------------------|------------------------------|---|--|------------------|------|------|------|------|------|------|
| | | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| 10 | Roof and ceiling only |  | 2.0 ⁱ | 3.5 ⁱ | 5.0 | 6.0 | 7.5 | 9.0 | 10.5 | 12.0 |
| | One floor, roof and ceiling |  | 3.5 ⁱ | 6.5 | 9.0 | 12.0 | 14.5 | 17.0 | 19.8 | 22.6 |
| | Two floors, roof and ceiling |  | 5.0 | 9.5 | 13.5 | 17.5 | 21.5 | 25.5 | 29.2 | 33.4 |
| 15 | Roof and ceiling only |  | 2.6 ⁱ | 4.6 | 6.5 | 7.8 | 9.8 | 11.7 | 13.7 | 15.7 |
| | One floor, roof and ceiling |  | 4.0 | 7.5 | 10.4 | 13.8 | 16.7 | 19.6 | 22.9 | 26.2 |
| | Two floors, roof and ceiling |  | 5.5 | 10.5 | 14.9 | 19.3 | 23.7 | 27.5 | 32.1 | 36.7 |
| 20 | Roof and ceiling only |  | 2.9 ⁱ | 5.2 | 7.3 | 8.8 | 11.1 | 13.2 | 15.4 | 17.6 |
| | One floor, roof and ceiling |  | 4.5 | 8.5 | 11.8 | 15.6 | 18.9 | 22.1 | 25.8 | 29.5 |
| | Two floors, roof and ceiling |  | 6.2 | 11.9 | 16.8 | 21.8 | 27.3 | 31.1 | 36.3 | 41.5 |

^aInterpolation is permitted. Extrapolation to buildings larger than addressed in this table is prohibited.

^bThis table applies to wind exposure category B. For wind exposure category C or D, multiply the required length of wall bracing by 1.3 or 1.6, respectively. Wind exposure categories are as defined in Table 321.25–I footnote b.

^cTabulated values are based on a nominal wall height of 10 feet. For nominal wall heights other than 10 feet, multiply the required length of bracing by the following factors: 0.90 for 8 feet, 0.95 for 9 feet, 1.05 for 11 feet, or 1.10 for 12 feet.

^dWhere minimum ½-inch gypsum wallboard interior finish is not provided, the required bracing amount for the affected rectangle side shall be multiplied by 1.4, except this increase is not required for the portal frame method.

^eAdjustments in footnotes b to d apply cumulatively.

^fPerpendicular sides to the front and rear sides are the left and right sides. Perpendicular sides to the left and right sides are the front and rear sides. See Figure 321.25–B.

^gContinuous sheathing shall be applied to all surfaces of the wall, including areas between brace panels and above and below wall openings.

^hWhen used on a wall line with continuous sheathing, each portal frame panel is counted for its actual length in contributing toward the length of continuous sheathing used on other portions of the same wall line, such as the building side at a given story level.

ⁱAny value of less than 4.0 in this table serves only as the beginning value for calculation purposes. The resulting value shall be 4.0 or greater, to be consistent with Table 321.25–H and subd. 2.

STEP 4: If required, apply any adjustment factors (adjustments may decrease or increase the required bracing amount) per the footnotes to the respective Table for the method used (intermittent or continuous). For example wall heights taller than 10' and wind exposure category C or D would both increase the bracing amount. Absence of interior ½" gypsum board sheathing increases the required bracing amount.

STEP 5: Repeat steps 2 through 4 considering wind in the perpendicular direction.

STEP 6: Determine the minimum required width of braced wall panels. For intermittent bracing method the minimum length of braced wall panel is given in Table 321.25-G (see step 2 above). For continuously sheathed bracing method the minimum width is determined using Table 321.25-H dependent on the maximum opening height adjacent to the panel and the wall height.

Table 321.25-H^{a, b}
MINIMUM WIDTHS OF CS-WSP AND CS-SFB BRACED WALL PANELS

| Maximum Opening Height Adjacent to Braced Wall Panel | Minimum Width of Full-Height Braced Wall Panel (inches) | | | |
|--|--|-----------------|------------------|------------------|
| | 8' Tall Wall | 9' Tall Wall | 10' Tall Wall | 12' Tall Wall |
| 5' - 4" | 24 | 27 | 30 | 36 |
| 6' - 8" | 32 | 30 | 30 | 36 |
| 8' | 48 | 41 | 38 | 36 |
| 9' | - | 54 | 46 | 41 |
| 10' | - | - | 60 | 48 |
| 12' | - | - | - | 72 |

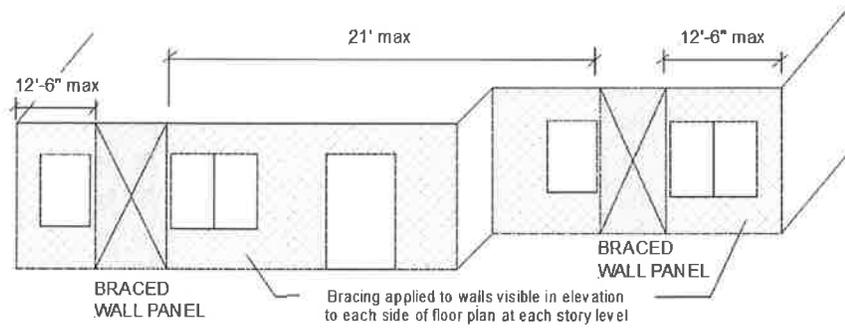
^aSheathing shall extend from the top of the top plate to the bottom of the bottom plate and may be multiple sheets. All joints shall be blocked.

^bInterpolation is permitted.

PF (Portal Frame) Method: Portal Frame narrow panel bracing may be used with either the intermittent or continuously sheathed bracing methods. For Intermittent bracing, per Table 321.25-I footnote 'h', each PF panel (16-24" wide per Figure 321.25-A) counts as ½ of a braced wall panel when determining compliance with Table 321.25-I. For Continuously Sheathed bracing, the actual length of each PF panel (16-24" wide per Figure 321.15-A) in feet, counts toward the required total length of bracing required.

STEP 7: Check that the location of braced wall panels meets Figure 321.25-C. A braced wall panel must start within 12 ½' from the end of the rectangle side and braced panels must be spaced a maximum of 21' edge to edge along the rectangle side. For intermittent or continuous methods, each PF panel meeting the minimum required width of Fig. 321.25-A counts as a braced wall panel when evaluating compliance with Fig. 321.25-C.

FIGURE 321.25-C
LOCATION OF BRACED WALL PANELS ALONG A BUILDING SIDE^a



^aA braced wall panel can be anything from one-half to one brace panel.

STEP 8: Repeat steps 1 through 7 for additional floor levels.

See also the One- and Two-Family Dwellings (Uniform Dwelling Code) Program web page for a Frequently Asked Questions document that provides further guidance and explanation on the use of the wall bracing permanent rule provisions.

**MINIMUM WIDTH OF BRACED WALL PANEL BETWEEN END OF WALL AND
GARAGE DOOR**

(Assuming garage end wall is the end of a rectangle side)

| METHOD | WALL HEIGHT | | | | |
|--|--------------------|------------------|------------|------------|------------|
| | 8' | 9' | 10' | 11' | 12' |
| PORTAL FRAME^{1,2} | 16" | 18" | 20" | 22" | 24" |
| CONTINUOUS³ SHEATHING (HEIGHT OF DOOR OPENING) | | | | | |
| 6'8" | 32" | 30" | 30" | 33" | 36" |
| 8' | 48" | 41" | 38" | 37" | 36" |
| 9' | | 54" | 46" | 43.5" | 41" |
| 10' | | | 60" | 54" | 48" |
| 12' | | | | | 72" |
| INTERMITTENT³ | 36" ⁴ | 36" ⁴ | 48" | 48" | 48" |

¹ If using Intermittent Sheathing on the remainder of the rectangle side, a Portal Frame panel counts as ½ panel toward the total number of panels needed.

² A full-height braced wall panel must go immediately on the other side of the garage door opening.

³ As long as the first panel starts within 12.5' of the end, there is no minimum width.

⁴ Counts as ½ panel toward the total number of panels needed.

Wall Bracing Compliance Worksheet

Complete this worksheet or provide equivalent information on the plans submitted with the permit application.

Sketch and dimension the building plan and the wall bracing rectangle(s) per 321.25(8)(c)1. and Figure 321.25-B. Provide and label additional sketches if the building plan/rectangles change at different floor levels.

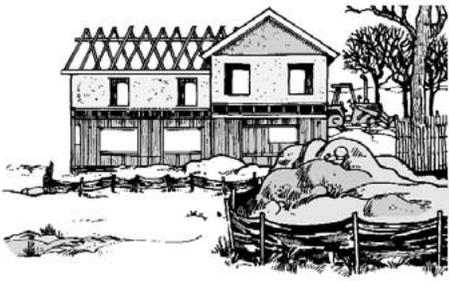
Indicate applicable Wall Bracing Method for each level (see Table 321.25-G), each labeled rectangle if more than one [see 321.25(8)(c)], and amount of bracing (# of braced panels or length of braced wall required) per the respective table (provide additional worksheets for additional rectangles as needed):

| Rectangle: | Wall Ht. = | Eave to Ridge Ht. = | Max. Opening Ht. = | | Wind Exp. = | |
|------------------------------|---|---------------------|--|------------|--|------------|
| Walls Supporting: | Intermittent method (LIB, DWB, WSP, SFB, GB, PCP) and # of panels per Table 321.25-I Min. panel width (Table 321.25-G) = | | Continuous method (CS-WSP, CS-SFB) and total length required per Table 321.25-J Min. panel width (Table 321.25-H) = | | PF Method (see Figure 321.25-A). Indicate number of PF panels 16-24" wide provided. Min. PF width (Fig. 321.25-A) = | |
| | Long side | Short side | Long side | Short side | Long side | Short side |
| Roof and ceiling only | | | | | | |
| One floor, roof and ceiling | | | | | | |
| Two floors, roof and ceiling | | | | | | |

| Rectangle: | Wall Ht. = | Eave to Ridge Ht. = | Max. Opening Ht. = | | Wind Exp. = | |
|------------------------------|---|---------------------|--|------------|--|------------|
| Walls Supporting: | Intermittent method (LIB, DWB, WSP, SFB, GB, PCP) and # of panels per Table 321.25-I Min. panel width (Table 321.25-G) = | | Continuous method (CS-WSP, CS-SFB) and total length required per Table 321.25-H Min. panel width (Table 321.25-H) = | | PF Method (see Figure 321.25-A). Indicate number of PF panels 16-24" wide provided. Min. PF width (Fig. 321.25-A) = | |
| | Long side | Short side | Long side | Short Side | Long side | Short side |
| Roof and ceiling only | | | | | | |
| One floor, roof and ceiling | | | | | | |
| Two floors, roof and ceiling | | | | | | |

PF Method: For Intermittent bracing, per Table 321.25-I footnote 'h', each PF panel (16-24" wide per Figure 321.25-A) counts as 1/2 of a braced wall panel when determining compliance with Table 321.25-I. For Continuously Sheathed bracing, the actual length of each PF panel (16-24" wide per Figure 321.25-A) in feet counts toward the required total length of bracing required. For intermittent or continuous methods, each PF panel meeting min. required width of Fig. 321.25-A counts as a braced wall panel when evaluating panel spacing per Fig. 321.25-C.

Indicate the location and construction details of required braced wall panels determined above on each rectangle side as required by Figure 321.25-C on the floor plans submitted with the permit application.



Erosion Control for Home Builders

By controlling erosion, home builders help keep our lakes and streams clean.

Eroding construction sites are a leading cause of water quality problems in Wisconsin. For every acre under construction, about a dump truck and a half of soil washes into a nearby lake or stream unless the builder uses erosion controls. Problems caused by this sediment include:



Taxes

Cleaning up sediment in streets, sewers and ditches adds extra costs to local government budgets.

Lower property values

Neighboring property values are damaged when a lake or stream fills with sediment. Shallow areas encourage weed growth and create boating hazards.

Poor fishing

Muddy water drives away fish like northern pike that rely on sight to feed. As it settles, sediment smothers gravel beds where fish like smallmouth bass find food and lay their eggs. Soil particles in suspension can act like a sand blaster during a storm and damage fish gills.

Nuisance growth of weeds and algae

Sediment carries fertilizers that fuel algae and weed growth.

Dredging

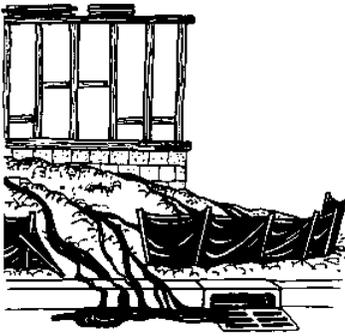
The expense of dredging sediment from lakes, harbors and navigation channels is paid for by taxpayers.

This fact sheet includes the diagrams and step-by-step instructions needed by builders on most home sites. Additional controls may be needed for sites that have steep slopes, are adjacent to lakes and streams, receive a lot of runoff from adjacent land, or are larger than an acre. If you need help developing an erosion control plan or training your staff, contact your local building inspection, zoning or erosion control office.

Controlling Erosion is Easy

Erosion control is important even for home sites of an acre or less. The materials needed are easy to find and relatively inexpensive – straw bales or silt fence, stakes, gravel, plastic tubes, and grass seed. Putting these materials to use is a straightforward process. Only a few controls are needed on most sites:

- Preserving existing trees and grass where possible to prevent erosion;
- Revegetating the site as soon as possible;
- Silt fence or straw bales to trap sediment on the downslope sides of the lot;
- Placing soil piles away from any roads or waterways;
- Diversions on upslope side and around stockpiles;
- Stone/rock access drive used by all vehicles to limit tracking of mud onto streets;
- Cleanup of sediment carried off-site by vehicles or storms; and
- Downspout extenders to prevent erosion from roof runoff.



A poorly installed silt fence will not prevent soil erosion. Fabric must be buried in a trench and sections must overlap (see diagram on back of this fact sheet).

WARNING! Extra measures may be needed if your site:

- is within 300 feet of a stream or wetland;
- is within 1000 feet of a lake;
- is steep (slopes of 12% or more);
- receives runoff from 10,000 sq. ft. or more of adjacent land;
- has more than an acre of disturbed ground.

For information on appropriate measures for these sites, contact your local building inspection, zoning or erosion control office.

Straw Bale or Silt Fence

- Install within 24 hours of land disturbance.
- Install on downslope sides of site parallel to contour of the land.
- Extended ends upslope enough to allow water to pond behind fence.
- Bury eight inches of fabric in trench (see back page).
- Stake (two stakes per bale).
- Leave no gaps. Stuff straw between bales, overlap sections of silt fence, or twist ends of silt fence together.
- Inspect and repair once a week and after every ½-inch rain. Remove sediment if deposits reach half the fence height. Replace bales after three months.
- Maintain until a lawn is established.

Soil Piles

- Cover with plastic and locate away from any downslope street, driveway, stream, lake, wetland, ditch or drainageway.
- Temporary seed such as annual rye or winter wheat is recommended for topsoil piles.

Access Drive

- Install an access drive using two-to-three-inch aggregate prior to placing the first floor decking on foundation.
- Lay stone six inches deep and at least seven feet wide from the foundation to the street (or 50 feet if less).
- Use to prevent tracking mud onto the road by all vehicles.
- Maintain throughout construction.
- In clay soils, use of geotextile under the stone is recommended.

Sediment Cleanup

- By the end of each work day, sweep or scrape up soil tracked onto the road.
- By the end of the next work day after a storm, clean up soil washed off-site.

Sewer Inlet Protection

- Protect on-site storm sewer inlets with straw bales, silt fences or equivalent measures.
- Inspect, repair and remove sediment deposits after every storm.

Downspout Extenders

- Not required, but highly recommended.
- Install as soon as gutters and downspouts are completed to prevent erosion from roof runoff.
- Use plastic drainage pipe to route water to a grassed or paved area. Once a lawn is established, direct runoff to the lawn or other pervious areas.
- Maintain until a lawn is established.

Preserving Existing Vegetation

- Wherever possible, preserve existing trees, shrubs, and other vegetation.
- To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation.
- Place plastic mesh or snow fence barriers around trees to protect the root area below their branches.

Revegetation

- Seed, sod or mulch bare soil as soon as possible. Vegetation is the most effective way to control erosion.

Seeding and Mulching

- Spread four to six inches of topsoil.
- Fertilize and lime if needed according to soil test (or apply 10 lb./1000 sq. ft. of 10-10-10 fertilizer).
- Seed with an appropriate mix for the site (see table).
- Rake lightly to cover seed with ¼" of soil. Roll lightly.
- Mulch with straw (70-90 lb. or one bale per 1000 sq. ft.).
- Anchor mulch by punching into the soil, watering, or by using netting or other measures on steep slopes.
- Water gently every day or two to keep soil moist. Less watering is needed once grass is two inches tall.

COMPLETED

NOT APPLICABLE

EROSION CONTROL PLAN CHECKLIST

Check (✓) appropriate boxes below, and complete the site diagram with necessary information.

Site Characteristics

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | North arrow, scale, and site boundary. Indicate and name adjacent streets or roadways. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of existing drainageways, streams, rivers, lakes, wetlands or wells. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of storm sewer inlets. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of existing and proposed buildings and paved areas. |
| <input type="checkbox"/> | <input type="checkbox"/> | The disturbed area on the lot. |
| <input type="checkbox"/> | <input type="checkbox"/> | Approximate gradient and direction of slopes before grading operations. |
| <input type="checkbox"/> | <input type="checkbox"/> | Approximate gradient and direction of slopes after grading operations. |
| <input type="checkbox"/> | <input type="checkbox"/> | Overland runoff (sheet flow) coming onto the site from adjacent areas. |

Erosion Control Practices

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Location of temporary soil storage piles. Note: Soil storage piles should be placed behind a sediment fence, a 10 foot wide vegetative strip, or should be covered with a tarp or more than 25 feet from any downslope road or drainageway. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of access drive(s). Note: Access drive should have 2 to 3 inch aggregate stone laid at least 7 feet wide and 6 inches thick. Drives should extend from the roadway 50 feet or to the house foundation (whichever is less). |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of sediment controls (filter fabric fence, straw bale fence or 10-foot-wide vegetative strip) that will prevent eroded soil from leaving the site. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of sediment barriers around on-site storm sewer inlets. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of diversions. Note: Although not specifically required by code, it is recommended that concentrated flow (drainageways) be diverted (re-directed) around disturbed areas. Overland runoff (sheet flow) from adjacent areas greater than 10,000 sq. ft. should also be diverted around disturbed areas. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of practices that will be applied to control erosion on steep slopes (greater than 12% grade). Note: Such practices include maintaining existing vegetation, placement of additional sediment fences, diversions, and re-vegetation by sodding or seeding with use of erosion control mats. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of practices that will control erosion on areas of concentrated runoff flow. Note: Unstabilized drainageways, ditches, diversions, and inlets should be protected from erosion through use of such practices as in-channel fabric or straw bale barriers, erosion control mats, staked sod, and rock rip-rap. When used, a given in-channel barrier should not receive drainage from more than two acres of unpaved area, or one acre of paved area. In-channel practices should not be installed in perennial streams (streams with year round flow). |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of other planned practices not already noted. |

COMPLETED

NOT APPLICABLE

Indicate management strategy by checking (✓) the appropriate box.

Management Strategies

Temporary stabilization of disturbed areas.

Note: It is recommended that disturbed areas and soil piles left inactive for extended periods of time be stabilized by seeding (between April 1 and September 15), or by other cover, such as tarping or mulching.

Permanent stabilization of site by re-vegetation or other means as soon as possible (lawn establishment).

- Indicate re-vegetation method: Seed Sod Other _____
- Expected date of permanent re-vegetation: _____
- Re-vegetation responsibility of: Builder Owner/Buyer
- Is temporary seeding or mulching planned if site is not seeded by Sept. 15 or sodded by Nov. 15? Yes No

Use of downspout and/or sump pump outlet extensions.

Note: It is recommended that flow from downspouts and sump pump outlets be routed through plastic drainage pipe to stable areas such as established sod or pavement.

Trapping sediment during de-watering operations.

Note: Sediment-laden discharge water from pumping operations should be ponded behind a sediment barrier until most of the sediment settles out.

Proper disposal of building material waste so that pollutants and debris are not carried off-site by wind or water.

Maintenance of erosion control practices.

- Sediment will be removed from behind sediment fences and barriers before it reaches a depth that is equal to half the height of the barrier.
- Breaks and gaps in sediment fences and barriers will be repaired immediately. Decomposing straw bales will be replaced (typical bale life is three months).
- All sediment that moves off-site due to construction activity will be cleaned up before the end of the same workday.
- All sediment that moves off-site due to storm events will be cleaned up before the end of the next workday.
- Access drives will be maintained throughout construction.
- All installed erosion control practices will be maintained until the disturbed areas they protect are stabilized.

EROSION CONTROL REGULATIONS

Erosion control and stormwater regulations can be complex. Local, state and, in some cases, federal regulations may apply. Before construction make sure you have the appropriate permits.

LOCAL ORDINANCES

Check with your county, city, village, or town for any local erosion control ordinances including shoreland zoning requirements. Except for new 1- & 2-family dwellings, local ordinances may be more strict than state regulations. They may also require erosion control on construction projects not affected by state or federal regulations.

UNIFORM DWELLING CODE (DEPT. OF COMMERCE)

CONTROLS REQUIRED

- Silt fences, straw bales, or other approved perimeter measures along downslope sides and side slopes.
- Access drive.
- Straw bales, filter fabric fences or other barriers to protect on-site sewer inlets.
- Additional controls if needed for steep slopes or other special conditions.

FOR MORE INFORMATION, CONTACT:

- Local building inspector
- Department of Commerce, Safety and Buildings Division, P.O. Box 7970, Madison, Wis. 53707-7970, (608) 267-5113.

STORMWATER PERMIT (DEPT. OF NATURAL RESOURCES)

CONTROLS REQUIRED

- Erosion control measures specified in the *Wisconsin Construction Site Best Management Practice Handbook*.
- Measures to control storm water after construction.

FOR MORE INFORMATION, CONTACT

- Department of Natural Resources, Storm Water Permits, P.O. 7921, Madison, WI 53707-7921, (608) 267-7694.

For more assistance on plan preparation, refer to the Wisconsin Uniform Dwelling Code, the DNR *Wisconsin Construction Site Best Management Handbook*, and UW-Extension publication *Erosion Control for Home Builders*. The *Wisconsin Uniform Dwelling Code* and the *Wisconsin Construction Site Best Management Handbook* are available through the State of Wisconsin Document Sales, (608) 266-3358.

Erosion Control for Home Builders (GWQ001) can be ordered through Extension Publications, (608) 262-3346 or the Department of Commerce, (608) 267-4405. A PDF version of *Erosion Control for Home Builders* (GWQ001) and *Standard Erosion Control Plan* are also available at <http://clean-water.uwex.edu/pubs/sheets>

This publication is available from county UW-Extension offices or from Extension Publications, 45 N. Charter St., Madison, WI 53715. (608) 262-3346 or toll-free (877) 947-7827. A publication of the University of Wisconsin-Extension in cooperation with the Wisconsin Department of Natural Resources and the Wisconsin Department of Commerce.



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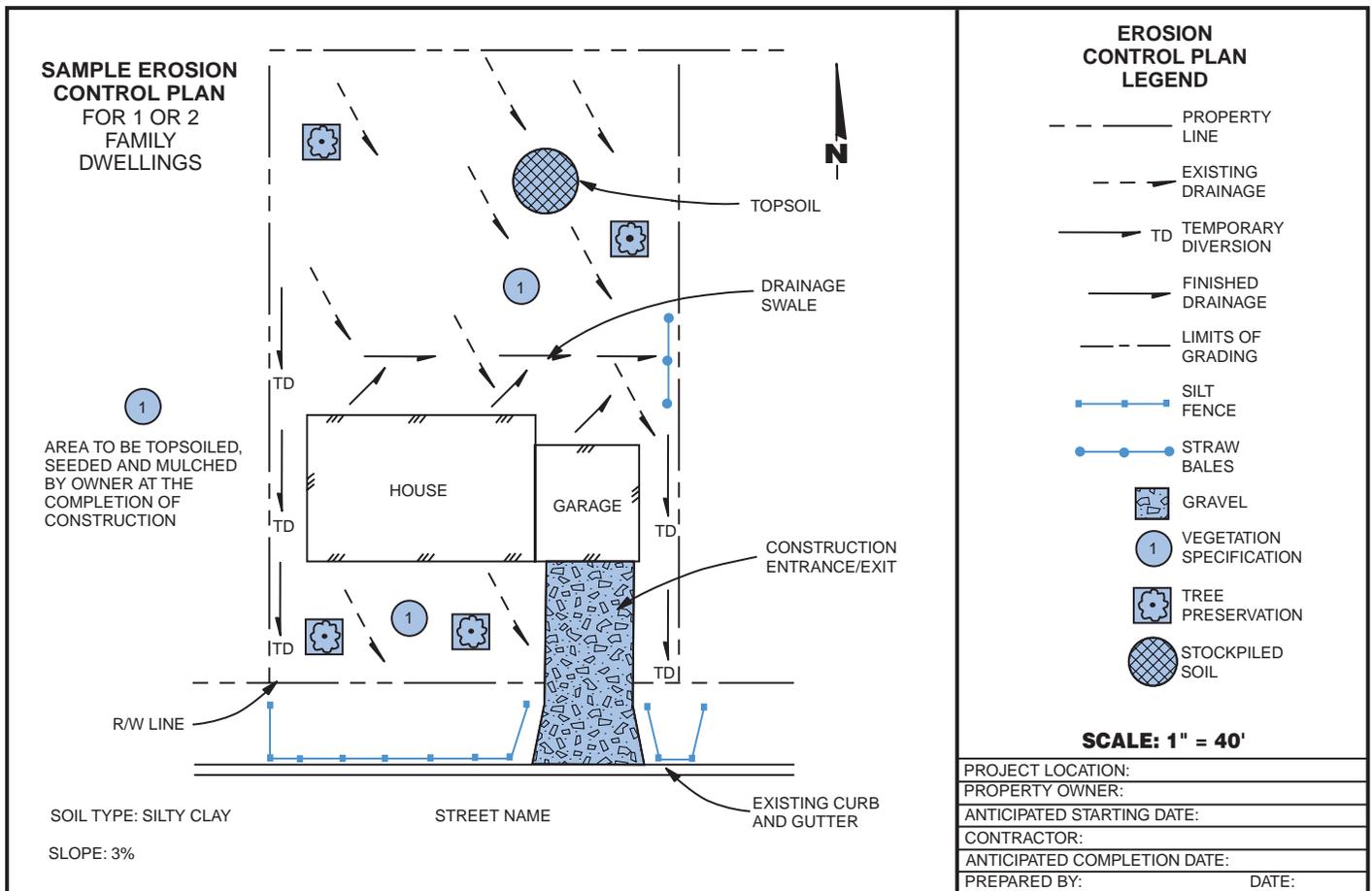
GWQ001A Standard Erosion Control Plan for 1 & 2 Family Dwelling Construction Sites

DNR WT-458-96

R-03-02-2M-10-S

Editing and design by the Environmental Resources Center, University of Wisconsin-Extension.





Sodding

- Spread four to six inches of topsoil.
- Fertilize and lime if needed according to soil test (or apply 10 lb./1000 sq. ft. of 10-10-10 fertilizer).
- Lightly water the soil.
- Lay sod. Tamp or roll lightly.
- On slopes, lay sod starting at the bottom and work toward the top. Laying in a brickwork pattern. Peg each piece down in several places.
- Initial watering should wet soil six inches deep (or until water stands one inch deep in a straight-sided container). Then water lightly every day or two to keep soil moist but not saturated for two weeks.
- Generally, the best times to sod and seed are early fall (Aug. 15-Sept. 15) or spring (May). If construction is completed after September 15, final seeding should be delayed. Sod may be laid until November 1. Temporary seed (such as rye or winter wheat) may be planted until October 15.

Mulch or matting may be applied after October 15, if weather permits. Straw bale or silt fences must be maintained until final seeding or sodding is completed in spring (by June 1).

Concrete Wash Water

- Dispose of concrete wash water in an area of soil away from surface waters where soil can act as a filter or evaporate the water. Dispose of remaining cement. Be aware that this water can kill vegetation.

De-Watering

- Dispose of de-watering water in a pervious area. Prevent the discharge of sediment from de-watering operations into storm sewers and surface waters.

Material Storage

- Manage chemicals, materials and other compounds to avoid contamination of runoff.

Typical Lawn Seed Mixtures

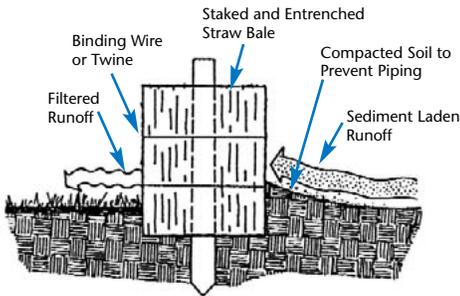
| Grass | Percent by Weight | |
|---------------------------------|-------------------|------------|
| | Sunny Site | Shady Site |
| Kentucky bluegrass | 65% | 15% |
| Fine fescue | 20% | 70% |
| Perennial ryegrass | 15% | 15% |
| Seeding rate (lb./1000 sq. ft.) | 3-4 | 4-5 |

Source: R.C. Newman, Lawn Establishment, UW-Extension, 1988.

COMMONLY USED EROSION CONTROLS

Straw Bale Fences

Cross Section of Straw Bale Installation



Source: Michigan Soil Erosion and Sedimentation Control Guidebook, 1975.

How to Install a Straw Bale Fence



1. Excavate a 4" deep trench.



2. Place bales in trench with bindings around sides away from the ground. Leave no gaps between bales.



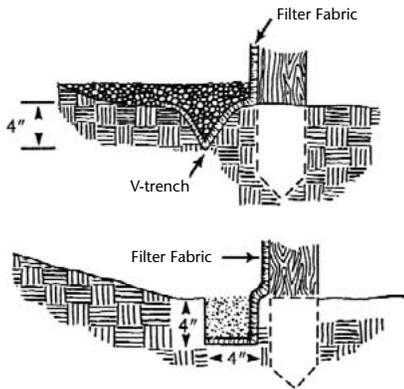
3. Anchor bales using two steel rebars or 2" x 2" wood stakes per bale. Drive stakes into the ground at least 8".



4. Backfill and compact the excavated soil.

Silt Fences

Cross Sections of Trenches for Silt Fences

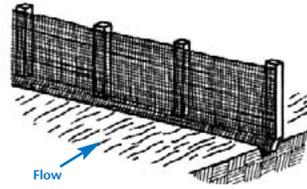


Sources: North Carolina Erosion and Sediment Control Planning and Design Manual, 1988.

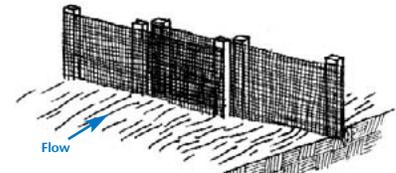
How to Install a Silt Fence



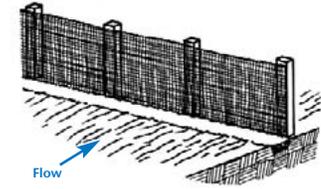
1. Excavate a 4" x 4" trench along the contour.



2. Stake the silt fence on downslope side of trench. Extended 8" of fabric into the trench.



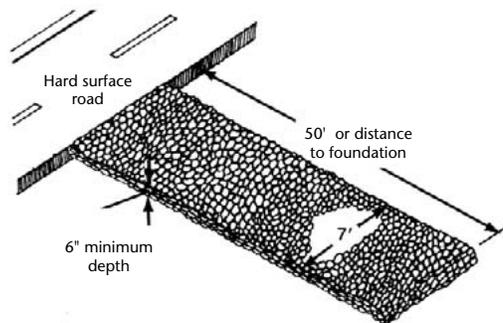
3. When joints are necessary, overlap ends for the distance between two stakes.



4. Backfill and compact the excavated soil.

Access Drive

How to Install an Access Drive



1. Install as soon as possible after start of grading.
2. Use two-to-three-inch aggregate stone.
3. Drive must be at least seven feet wide and 50 feet long or the distance to the foundation, whichever is less.
4. Replace as needed to maintain six-inch depth.

This publication is available from county UW-Extension offices or from Extension Publications, 630 W. Mifflin St., Madison, WI 53703. (608) 262-3346.

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GWQ001 Erosion Control for Home Builders

DNR WT-457-96

R-1-00-10M-25-S



Standard Erosion Control Plan

for 1- & 2-Family Dwelling Construction Sites

According to Chapters Comm 20 & 21 of the Wisconsin Uniform Dwelling Code, soil erosion control information needs to be included on the plot plan which is submitted and approved prior to the issuance of building permits for 1- & 2-family dwelling units in those jurisdictions where the soil erosion control provisions of the Uniform Dwelling Code are enforced. This Standard Erosion Control Plan is provided to assist in meeting this requirement.

Instructions:

1. Complete this plan by filling in requested information, completing the site diagram and marking appropriate boxes on the inside of this form.
2. In completing the site diagram, give consideration to potential erosion that may occur before, during, and after grading. Water runoff patterns can change significantly as a site is reshaped.
3. Submit this plan at the time of building permit application.

PROJECT LOCATION _____

BUILDER _____ OWNER _____

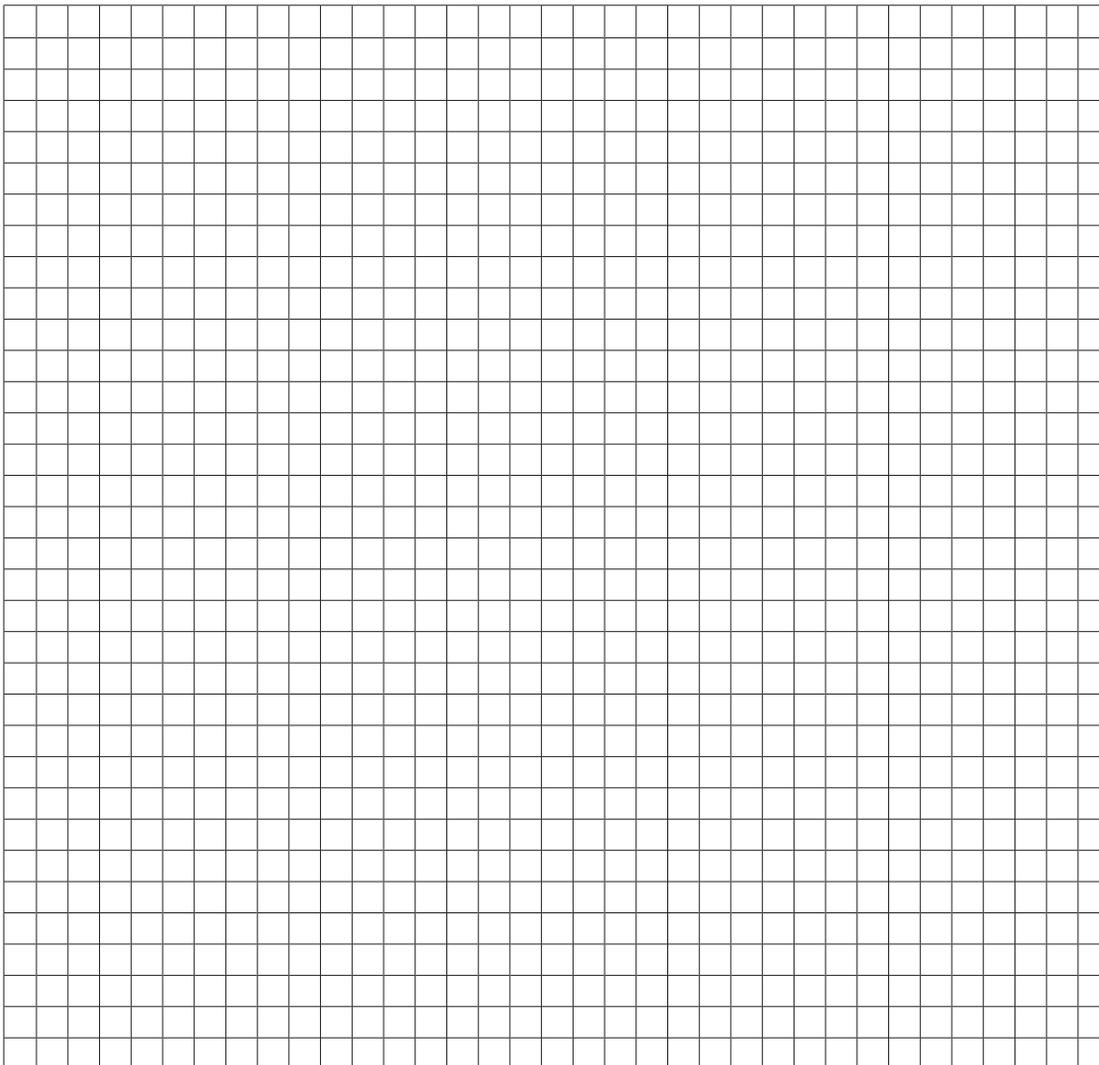
WORKSHEET COMPLETED BY _____ DATE _____

Please indicate north by completing the arrow.



SITE DIAGRAM

Scale: 1 inch = ____ feet



EROSION CONTROL PLAN LEGEND

--- PROPERTY LINE

—> EXISTING DRAINAGE

—> TD TEMPORARY DIVERSION

—> FINISHED DRAINAGE

--- LIMITS OF GRADING

—■— SILT FENCE

—●— STRAW BALES

GRAVEL

VEGETATION SPECIFICATION

TREE PRESERVATION

STOCKPILED SOIL

Building Cross Section

Roof:

Pitch- _____ /12
 Shingles- _____
 Felt- _____ lb.
 Ice Barrier- _____
 Roof Sheathing- _____
 Truss- Yes _____ No _____ (if yes truss clips must be installed if span is over 6')

if no answer the following

Rafter Size- _____ x _____
 Rafter Spacing- _____ " O.C.
 Rafter Clear Span- _____
 Rafter Species & Grade- _____ / _____
 Ridge Type & Size- _____ / _____
 Ceiling Joist Size- _____
 Ceiling Joist Spacing- _____
 Ceiling Joist Species & Grade- _____ / _____
 Insulation Type & R-Value- _____ / R _____

Roof Ventilation- _____

Walls:

Siding- _____
 Sheathing Type & Thickness- _____ / _____"
 Insulation Type / R-Value- _____ R- _____
 Header Size- _____ x _____
 Ceiling Height- _____
 Stud Size & Spacing- _____ x _____ / _____" O.C.

Interior Finish- _____
 Grade of Framing Lumber - _____

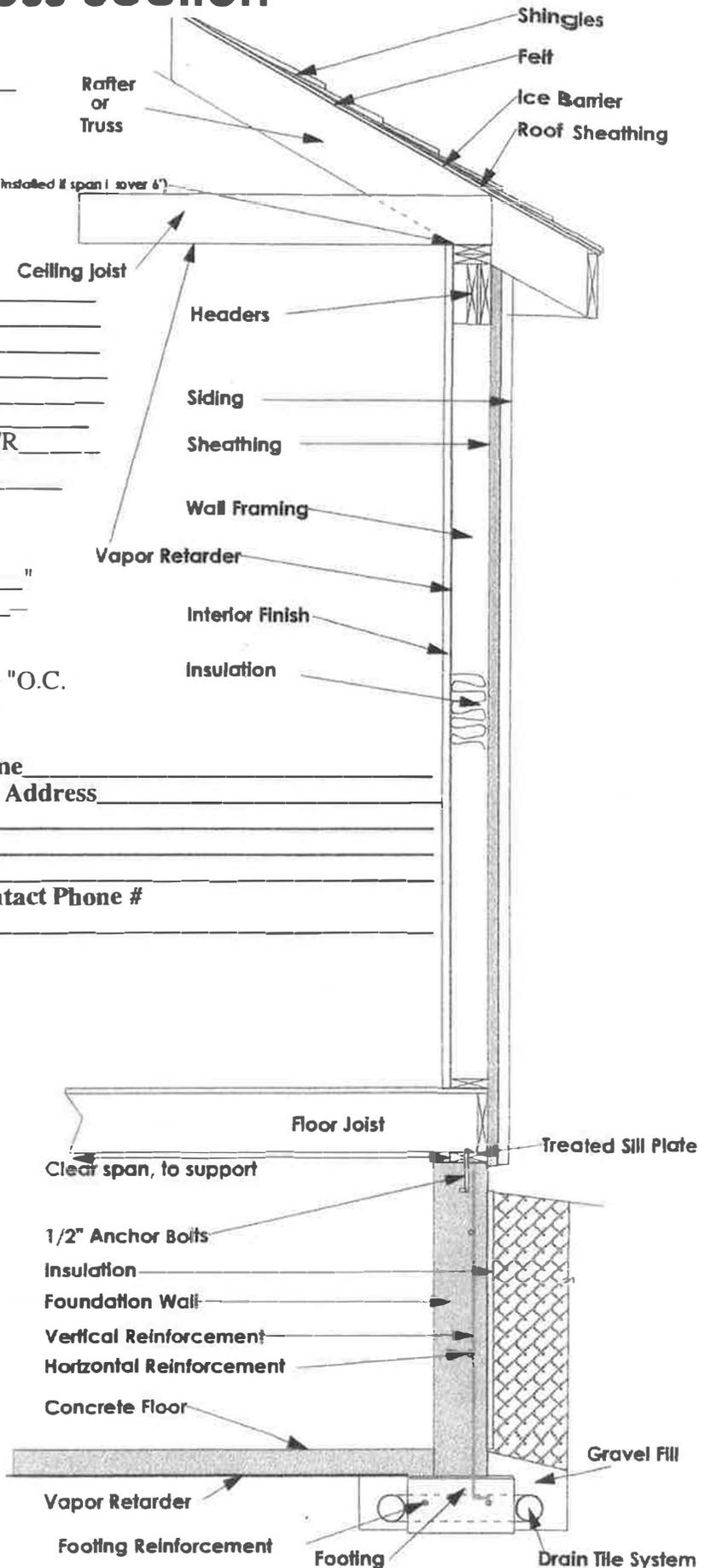
Floor:

Sub-Floor _____
 Floor Joist Type _____
 Floor Joist Size _____
 Floor Joist Spacing- _____
 Floor Joist Clear Span- _____
 Floor Joist Species- _____
 Floor Joist Grade- _____
 Beam Support, Type & Size- _____ / _____
 Distance From Grade- _____

Foundation:

Anchor Type _____
 Anchor Spacing _____
 Sill Plate- _____
 Insulation Type / R-Value- _____ R- _____
 Wall Height- _____
 Poured Wall Size- _____
 Block Wall Size- _____
 Vertical Reinforcement- # _____ - _____ O.C.
 Horizontal Reinforcement- # _____ - _____ O.C.
 Concrete Floor Thickness- _____
 Vapor Retarder- _____
 Drain Tile Size- _____
 Column Pad Size- _____ x _____ x _____
 Column Spacing- _____
 Footing Width- _____
 Footing Height- _____
 Footing Depth Below Grade- _____
 Footing Reinforcement- # _____ - _____ O.C.

Revised 3-1-07 jaw



Name _____
 Job Address _____

Contact Phone # _____

| | | |
|---|--|-----------------------------------|
| Dept of Safety & Professional Services Industry Services Division Wisconsin Stats. 101.63, 101.73 | <h2 style="margin:0;">Wisconsin Uniform Building Permit Application</h2> <p style="margin:0; font-size: small;">Instructions on back of second ply. The information you provide may be used by other government agency programs [(Privacy Law, s. 15.04 (1)(m))]</p> | Application No. Parcel No. |
|---|--|-----------------------------------|

PERMIT REQUESTED Constr. HVAC Electric Plumbing Erosion Control Other:

| | | |
|--|-----------------|----------|
| Owner's Name | Mailing Address | Tel. |
| Contractor Name & Type | Lic/Cert# | Exp Date |
| Dwelling Contractor (Constr.) | | |
| Dwelling Contr. Qualifier (The Dwelling Contr. Qualifier shall be an owner, CEO, COB or employee of the Dwelling Contr.) | | |
| HVAC | | |
| Electrical Contractor | | |
| Electrical Master Electrician | | |
| Plumbing | | |

PROJECT LOCATION Lot area _____ Sq.ft. One acre or more of soil will be disturbed Town Village City of _____ _____ 1/4, _____ 1/4, of Section _____, T _____ N, R _____ E/W

| | | | | |
|--------------------|-------------------|------------------|-----------------|-----------------|
| Building Address | County | Subdivision Name | Lot No. | Block No. |
| Zoning District(s) | Zoning Permit No. | Setbacks: | Front _____ ft. | Rear _____ ft. |
| | | | Left _____ ft. | Right _____ ft. |

| 1. PROJECT <input type="checkbox"/> New <input type="checkbox"/> Repair <input type="checkbox"/> Alteration <input type="checkbox"/> Raze <input type="checkbox"/> Addition <input type="checkbox"/> Move <input type="checkbox"/> Other: | 3. OCCUPANCY <input type="checkbox"/> Single Family <input type="checkbox"/> Two Family <input type="checkbox"/> Garage <input type="checkbox"/> Other: | 6. ELECTRIC Entrance Panel Amps: _____ <input type="checkbox"/> Underground <input type="checkbox"/> Overhead 7. WALLS <input type="checkbox"/> Wood Frame <input type="checkbox"/> Steel <input type="checkbox"/> ICF <input type="checkbox"/> Timber/Pole <input type="checkbox"/> Other: | 9. HVAC EQUIP. <input type="checkbox"/> Furnace <input type="checkbox"/> Radiant Basebd <input type="checkbox"/> Heat Pump <input type="checkbox"/> Boiler <input type="checkbox"/> Central AC <input type="checkbox"/> Fireplace <input type="checkbox"/> Other: | 12. ENERGY SOURCE <table style="width:100%; font-size: x-small;"> <tr> <td>Fuel</td> <td>Nat Gas</td> <td>LP</td> <td>Oil</td> <td>Elec</td> <td>Solid</td> <td>Solar Geo</td> </tr> <tr> <td>Space Htg</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Water Htg</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | Fuel | Nat Gas | LP | Oil | Elec | Solid | Solar Geo | Space Htg | <input type="checkbox"/> | Water Htg | <input type="checkbox"/> | | | | | | | | | |
|--|--|---|---|---|--------------------------|--------------------------|----|-----|------|-------|-----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|--|--|---|---|---|---|---|--|
| Fuel | Nat Gas | LP | Oil | Elec | Solid | Solar Geo | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Space Htg | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Htg | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. AREA INVOLVED (sq ft) <table style="width:100%; font-size: x-small;"> <tr> <th></th> <th>Unit 1</th> <th>Unit 2</th> <th>Total</th> </tr> <tr> <td>Unfin.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bsmt</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Living Area</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Garage</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Deck/Porch</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td></td> <td></td> <td></td> </tr> </table> | | Unit 1 | Unit 2 | Total | Unfin. | | | | Bsmt | | | | Living Area | | | | Garage | | | | Deck/Porch | | | | Totals | | | | 4. CONST. TYPE <input type="checkbox"/> Site-Built <input type="checkbox"/> Mfd. per WI UDC <input type="checkbox"/> Mfd. per US HUD 5. STORIES <input type="checkbox"/> 1-Story <input type="checkbox"/> 2-Story <input type="checkbox"/> Other: <input type="checkbox"/> Basement | 8. USE <input type="checkbox"/> Seasonal <input type="checkbox"/> Permanent <input type="checkbox"/> Other: | 10. SEWER <input type="checkbox"/> Municipal <input type="checkbox"/> Sanitary Permit# _____ | 11. WATER <input type="checkbox"/> Municipal <input type="checkbox"/> On-Site Well | 13. HEAT LOSS _____ BTU/HR Total Calculated Envelope and Infiltration Losses (available from "Total Building Heating Load" on Rescheck report) | 14. EST. BUILDING COST w/o LAND \$ _____ |
| | Unit 1 | Unit 2 | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unfin. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bsmt | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Living Area | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Garage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deck/Porch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Totals | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

I understand that I: am subject to all applicable codes, laws, statutes and ordinances, including those described on the reverse side of the last ply of this form; am subject to any conditions of this permit; understand that the issuance of this permit creates no legal liability, express or implied, on the state or municipality; and certify that all the above information is accurate. If one acre or more of soil will be disturbed, I understand that this project is subject to ch. NR 151 regarding additional erosion control and stormwater management and the owner shall sign the statement on the back of the permit if not signing below. I expressly grant the building inspector, or the inspector's authorized agent, permission to enter the premises for which this permit is sought at all reasonable hours and for any proper purpose to inspect the work which is being done.

I vouch that I am or will be an owner occupant of this dwelling for which I am applying for an erosion control or construction permit without a Dwelling Contractor Certification and have read the cautionary statement regarding contractor responsibility on the second page of this form.

APPLICANT (Print:) _____ **Sign:** _____ **DATE** _____

APPROVAL CONDITIONS This permit is issued pursuant to the following conditions. Failure to comply may result in suspension or revocation of this permit or other penalty. See attached for conditions of approval.

| | | | | |
|-----------------------------|---|--|--|--|
| ISSUING JURISDICTION | <input type="checkbox"/> Town of _____ <input type="checkbox"/> Village of _____ <input type="checkbox"/> City of _____ | <input type="checkbox"/> County of _____ <input type="checkbox"/> State _____ | State-Contracted Inspection Agency#: _____ | Municipality Number of Dwelling Location _____ |
|-----------------------------|---|--|--|--|

| | | | |
|---------------------|--|--------------------------|--------------------------|
| FEES: | PERMIT(S) ISSUED | WIS PERMIT SEAL # | PERMIT ISSUED BY: |
| Plan Review \$ | <input type="checkbox"/> Construction | | Name _____ |
| Inspection \$ | <input type="checkbox"/> HVAC | | Date _____ Tel. _____ |
| Wis. Permit Seal \$ | <input type="checkbox"/> Electrical | | Cert No. _____ |
| Other \$ | <input type="checkbox"/> Plumbing | | Email: _____ |
| Total \$ | <input type="checkbox"/> Erosion Control | | |

Cautionary Statement to Owners Obtaining Building Permits

101.65(1r) of the Wisconsin Statutes requires municipalities that enforce the Uniform Dwelling Code to provide an owner who applies for a building permit with a statement advising the owner that:

If the owner hires a contractor to perform work under the building permit and the contractor is not bonded or insured as required under s. 101.654 (2) (a), the following consequences might occur:

(a) The owner may be held liable for any bodily injury to or death of others or for any damage to the property of others that arises out of the work performed under the building permit or that is caused by any negligence by the contractor that occurs in connection with the work performed under the building permit.

(b) The owner may not be able to collect from the contractor damages for any loss sustained by the owner because of a violation by the contractor of the one- and two- family dwelling code or an ordinance enacted under sub. (1) (a), because of any bodily injury to or death of others or damage to the property of others that arises out of the work performed under the building permit or because of any bodily injury to or death of others or damage to the property of others that is caused by any negligence by the contractor that occurs in connection with the work performed under the building permit.

I vouch that I am or will be owner-occupant of this dwelling for which I am applying for an erosion control or construction permit without a Dwelling Contractor Certification and have read the cautionary statement regarding contractor responsibility above.

Cautionary Statement to Contractors for Projects Involving Building Built Before 1978

If this project is in a dwelling or child-occupied facility, built before 1978, and disturbs 6 sq. ft. or more of paint per room, 20 sq. ft. or more of exterior paint, or involves windows, then the requirements of ch. DHS 163 requiring Lead-Safe Renovation Training and Certification apply. Call (608)261-6876 or go to the Wisconsin Department of Health Services' lead homepage for details of how to be in compliance.

Wetlands Notice to Permit Applicants

You are responsible for complying with state and federal laws concerning the construction near or on wetlands, lakes, and streams. Wetlands that are not associated with open water can be difficult to identify. Failure to comply may result in removal or modification of construction that violates the law or other penalties or costs. For more information, visit the Department of Natural Resources wetlands identification web page or contact a Department of Natural Resources service center.

Contractor Credential Requirements

All contractors shall possess an appropriate contractor credential issued by the Wisconsin Department of Safety and Professional Services. Contractors are also required to only subcontract with contractors that hold the appropriate contractor credentials. Contractor credentials processed through the Wisconsin Department of Safety and Professional Services Electronic Safety and Licensing Application (eSLA) may take up to one business day before a permit can be submitted electronically through the Online Building Permit System.

Additional Responsibilities for Owners of Projects Disturbing One or More Acre of Soil

I understand that this project is subject to ch. NR 151 regarding additional erosion control and stormwater management and will comply with those standards.

I acknowledge I have read and understood the contents of this page.

Owner's Name:

Owner's Signature:

Date:

IMPORTANT: NOTICE OF REQUIRED INSPECTIONS OF 1 & 2 FAMILY HOMES

PLEASE HAVE THE FOLLOWING ITEMS READY WHEN CONTACTING YOUR INSPECTOR:
PERMIT NUMBER - SITE ADDRESS - INSPECTION REQUEST

Per Wisconsin Administrative Code, SPS 320.10(2)(b)1: The applicant or an authorized representative shall request inspections from the municipality or authorized UDC inspection agency administering and enforcing this code.

Please contact your Building Inspector for the following REQUIRED INSPECTIONS as they apply to your project with permit number . Remember it is the responsibility of the homeowner, contractor, or other authorized representative to request inspections.

- EROSION CONTROL – Erosion control will be inspected concurrently with all other inspections. Prior to any land disturbing construction activity, sediment control practices shall be employed in accordance with the approved plan. The sediment control measures shall be maintained throughout your project and until the disturbed areas have been stabilized by a perennial vegetative cover.
 - FOOTINGS – Inspection of footings shall be required after forms are in place and prior to pouring concrete. The excavation, soil conditions, form placement, and compliant installation of a drain tile system, if applicable, shall be part of this inspection.
 - FOUNDATION REINFORCEMENT – If required for Code compliance, the placement of reinforcement, such as rebar mats, shall be inspected prior to the placement of permanent foundation material, such as concrete.
 - FOUNDATION – The foundation shall be inspected after completion and prior to back-filling. The drain tile system (including aggregate coverage), damp-proofing, placement of the foundation on the footing, exterior insulation, and anchor-bolt placement are included in this inspection.
 - ELECTRIC SERVICE (Temporary) – Inspecting for ground rods, secure installation, equipment condition, and utility compliance.
 - ELECTRIC SERVICE (Permanent) – When calling for an electric service (permanent or temporary) inspection, provide the inspector with the utility company name. The utility company will not energize your service without this inspection.
 - BASEMENT FLOOR AREA – These inspections shall include the following:
 - Any UNDERFLOOR PLUMBING, ELECTRICAL or HVAC
 - INTERIOR DRAIN TILE SYSTEM, including base course and sump pit
 - STRUCTURAL BASE COURSE FOR THE FLOOR, if required
 - UNDERFLOOR VAPOR RETARDER
 - ROUGH CONSTRUCTION – Construction plans with wall-bracing details and truss plans shall be on-site for review by your inspector.
 - ROUGH PLUMBING – Completed plumbing piping systems with TEST ON will be inspected at this time.
 - ROUGH ELECTRICAL – Prior to concealment.
 - ROUGH HEATING, VENTILATING, and AIR-CONDITIONING – Prior to concealment.
- *NOTE* All ROUGHS shall be readily visible and inspected prior to the installation of insulation or any other form of concealment, including, but not limited to, drywall, paneling, ceiling tiles, etc.**
- INSULATION – An inspection of the insulation, vapor retarders, and air sealing shall be made after they are installed, but prior to being concealed by drywall or other covering.
 - FINAL INSPECTION – No dwelling shall be occupied nor shall occupancy be granted prior to a final inspection being completed that finds no critical violations of the Code that could reasonably be expected to affect the health and safety of a person using the dwelling. NOTE: Moving and storing furniture and other household items in the house prior to final inspection is prohibited.

FINAL NOTE: Your inspector will make every effort to complete inspections in the timeframe requested. Be aware, however, that the inspector has until the end of the second business day following the day of the request to satisfy a request for inspection. Also be aware that construction may not proceed beyond the point of inspection until the inspection has been completed. With that in mind, you are encouraged to contact your inspector and request your inspection several days prior to the desired day of your inspection to ensure they can meet your request. Also note that we have the ability to do remote video inspections.

SITE PLAN SKETCH (SCALE: ONE SQUARE = _____ FEET)

