



NEW BUILDING/ADDITION APPLICATION

Address: _____

Owner: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____

Email Address: _____

Building Contractor: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____

Email Address: _____

PROPOSED USE: Please check one

- _____ Single Family-New (A000)
- _____ Two Family-New (A010)
- _____ Residential Addition (attached garage) (A020)
- _____ Res-Accessory Structure (shed, detached garage) (A030)
- _____ Manufactured Home (A040)
- _____ Single Family (Attached-Condo) (A050)
- _____ Multi-Family No. of Units _____ (C000)
- _____ Commercial-New _____ Heated _____ Unheated
- _____ Comm. Additions _____ Heated _____ Unheated
- _____ Comm.---Alterations Heated (C031)
- _____ Industrial—New (C030)
- _____ Store or Customer Service (C060)
- _____ Service Station/Garage (C070)
- _____ Office, Bank, Professional (C080)
- _____ Hotel/Motel No. of Units: _____ (C120)
- _____ Other: _____

ESTIMATED COST OF PROJECT: _____

DESCRIPTION: _____

Size of Building:

Principal Building: _____ Number of Stories _____ Width _____ Depth _____ Area _____ Ht. Above Grade _____

Accessory Building: _____ Attached _____ Detached _____ Width _____ Depth _____ Area _____ Ht. Above Grade _____

Garage: _____ Attached _____ Detached _____ Width _____ Depth _____ Area _____ Ht. Above Grade _____

Building Characteristics:

Foundation: _____ Full _____ Crawl _____ Slab _____ Concrete _____ Masonry _____ Thickness _____

Heating Fuel: _____ Natural Gas _____ Electric _____ Other _____

Heating System: _____ Forced Air _____ Electric _____ Hot Water _____ Other _____

Interior Wall Covering: _____ Drywall _____ Wood _____ Plaster _____ Other _____

Exterior Wall Covering: _____ Vinyl _____ Wood _____ Metal _____ Masonry _____ Other _____

Roof Covering: _____ Asphalt _____ Wood _____ Metal _____ Other _____

Insulation: _____ Fiberglass _____ Expanded _____ Other _____

Fireplace: _____ Yes _____ No _____ Number _____

Number of Bedrooms: _____ Per Unit _____ Total _____

Number of Baths: _____ Full _____ Partial _____

The applicant certifies that all of the above information is true and correct, and agrees to do the work described according to the information given, the plans and specifications filed, and to be in full compliance with all applicable laws, codes, rules and regulations of the City of Beloit and the State of Wisconsin. The applicant has read the Cautionary Statement to owners obtaining building permits. **This permit is good for one year; deadlines contained therein are always subject to any shorter deadline contained in an order imposed by the Division of Community Development and Housing Services.**

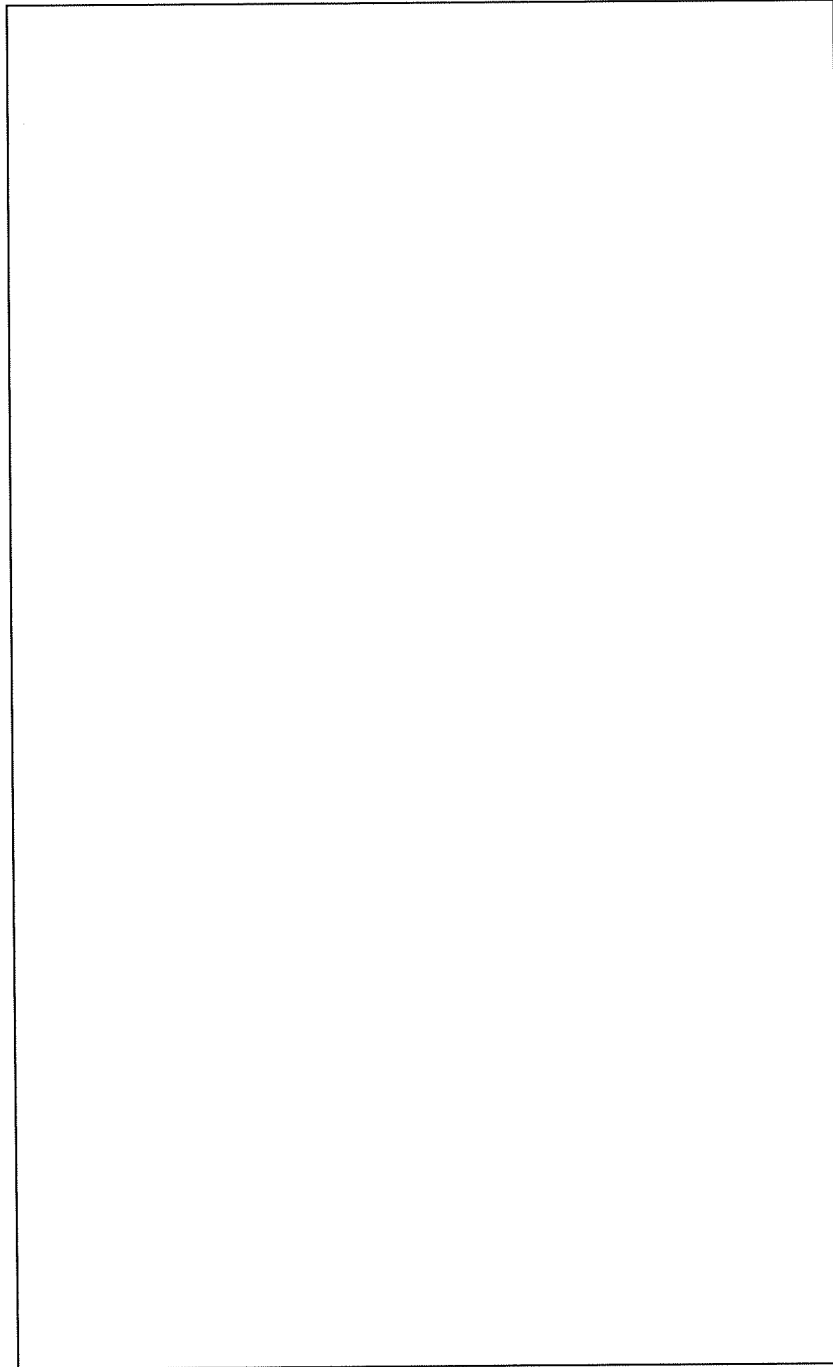
Applicant's Signature: _____

Inspector's Signature: _____

Fee Amount: _____

Building Services (608) 364-6700 Date _____ Cash: _____ Check _____ Check #: _____ Credit Card: _____

Site Plan/Plat Map (Required)



Required Elements:

- Property Lines
- Adjacent Streets
- Existing Structures
- Fence Location & Height
- Distance between fence and property lines
- Distance between fence and existing structures
- Berms or dramatic changes in grade

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--------------------------|--------------------------|--------------------------|-----|------|-------|-----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 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="font-size: small; margin: 5px 0;">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 <input type="checkbox"/> Constr. <input type="checkbox"/> HVAC <input type="checkbox"/> Electric <input type="checkbox"/> Plumbing <input type="checkbox"/> Erosion Control <input type="checkbox"/> Other: _____ | | | | | | | | | | | | | | | | | | | | | | | | |
| Owner's Name _____ | | Mailing Address _____ | Tel. _____ | | | | | | | | | | | | | | | | | | | | | |
| Contractor Name & Type _____ | | Lic/Cert# _____ | Exp Date _____ | | | | | | | | | | | | | | | | | | | | | |
| Dwelling Contractor (Constr.) _____ | | Mailing Address _____ | | | | | | | | | | | | | | | | | | | | | | |
| Dwelling Contr. Qualifier (The Dwelling Contr. Qualifier shall be an owner, CEO, COB or employee of the Dwelling Contr.) _____ | | Telephone & Email _____ | | | | | | | | | | | | | | | | | | | | | | |
| HVAC _____ | | _____ | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Contractor _____ | | _____ | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Master Electrician _____ | | _____ | | | | | | | | | | | | | | | | | | | | | | |
| Plumbing _____ | | _____ | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT LOCATION | Lot area _____ Sq. ft. | <input type="checkbox"/> One acre or more of soil will be disturbed | <input type="checkbox"/> Town <input type="checkbox"/> Village <input type="checkbox"/> City of _____ | | | | | | | | | | | | | | | | | | | | | |
| 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 | | 3. OCCUPANCY | 6. ELECTRIC | | | | | | | | | | | | | | | | | | | | | |
| <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: _____ | | <input type="checkbox"/> Single Family <input type="checkbox"/> Two Family <input type="checkbox"/> Garage <input type="checkbox"/> Other: _____ | 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: _____ | | | | | | | | | | | | | | | | | | | | | |
| 2. AREA INVOLVED (sq ft) | | 4. CONST. TYPE | 9. HVAC EQUIP. | | | | | | | | | | | | | | | | | | | | | |
| | Unit 1 Unit 2 Total | <input type="checkbox"/> Site-Built <input type="checkbox"/> Mfd. per WIUDC <input type="checkbox"/> Mfd. per US HUD | <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: _____ | | | | | | | | | | | | | | | | | | | | | |
| Unfin. | | 5. STORIES | 10. SEWER | | | | | | | | | | | | | | | | | | | | | |
| Bsmt | | <input type="checkbox"/> 1-Story <input type="checkbox"/> 2-Story <input type="checkbox"/> Other: _____ <input type="checkbox"/> Basement | <input type="checkbox"/> Municipal <input type="checkbox"/> Sanitary Permit# _____ | | | | | | | | | | | | | | | | | | | | | |
| Living Area | | 8. USE | 11. WATER | | | | | | | | | | | | | | | | | | | | | |
| Garage | | <input type="checkbox"/> Seasonal <input type="checkbox"/> Permanent <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Municipal <input type="checkbox"/> On-Site Well | | | | | | | | | | | | | | | | | | | | | |
| Deck/Porch | | | | | | | | | | | | | | | | | | | | | | | | |
| Totals | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. ENERGY SOURCE <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">Fuel</td> <td style="width:10%;">Nat Gas</td> <td style="width:10%;">LP</td> <td style="width:10%;">Oil</td> <td style="width:10%;">Elec</td> <td style="width:10%;">Solid</td> <td style="width:10%;">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"/> | <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"/> |
| 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"/> | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | |
| \$ _____ | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>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.</p> <input type="checkbox"/> 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. <input type="checkbox"/> See attached for conditions of approval. | | | | | | | | | | | | | | | | | | | | | | | | |
| ISSUING JURISDICTION | | State-Contracted Inspection Agency#: | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Town of _____ <input type="checkbox"/> Village of _____ <input type="checkbox"/> City of _____ | | <input type="checkbox"/> County of _____ <input type="checkbox"/> State _____ | | | | | | | | | | | | | | | | | | | | | | |
| | | Municipality Number of Dwelling Location _____ | | | | | | | | | | | | | | | | | | | | | | |
| FEES: | | PERMIT(S) ISSUED | | | | | | | | | | | | | | | | | | | | | | |
| Plan Review | \$ _____ | <input type="checkbox"/> Construction <input type="checkbox"/> HVAC <input type="checkbox"/> Electrical <input type="checkbox"/> Plumbing <input type="checkbox"/> Erosion Control | | | | | | | | | | | | | | | | | | | | | | |
| Inspection | \$ _____ | WIS PERMIT SEAL # _____ | | | | | | | | | | | | | | | | | | | | | | |
| Wis. Permit Seal | \$ _____ | PERMIT ISSUED BY: Name _____ Date _____ Tel. _____ Cert No. _____ Email: _____ | | | | | | | | | | | | | | | | | | | | | | |
| Other | \$ _____ | | | | | | | | | | | | | | | | | | | | | | | |
| Total | \$ _____ | | | | | | | | | | | | | | | | | | | | | | | |



Planning & Building Services
Zoning Certificate Application
For 1- and 2-Family Construction

(Please Type or Print)

- 1. Property Address:
2. Tax Parcel Number:
3. Legal description: Lot, Block, Subdivision,
4. Owner of record: Phone:

(Address) (City) (State) (Zip)

- 5. Applicant's Name:
(Address) (City) (State) (Zip)
(Office Phone #) (Cell Phone #) (E-mail Address)

- 6. The property is located in a(n) zoning district.
7. The existing use(s) of this property are:
8. All the proposed use(s) for this property are:

9. Lot Size and Dimensions:
Property dimensions are: feet, by feet = Square Feet.

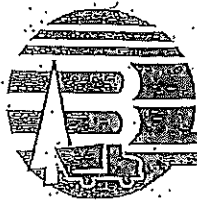
10. Setbacks:
Front Yard: Corner Side: Interior Sides: & Rear Yard:

11. Size of Building:
Principal Building: Number of Stories Width Depth Area
Ht. Above Grade

The applicant's signature below indicates the information contained in this application and on any accompanying documents is true and correct.

(Signature of Owner) (Print name) (Date)
(Signature of Applicant) (Print name) (Date)

To be completed by Planning & Building Staff:
Zoning Certificate: [] Approved [] Denied
By: Date:
Certificate of Occupancy: [] Approved [] Denied
By: Date:
Reason for Denial:



**CITY OF BELOIT
 AND THE UNITED STATES POSTAL SERVICE**

MAILBOX CLEARANCE NOTICE

The City of Beloit and the United States Postal Service hereby advise that the location of your mailbox may affect service delivery and snow removal. All mailboxes shall comply with the following requirements unless otherwise instructed by the U.S. Postal Service:

- ◇ Be positioned in height 46" from the bottom of the mailbox to the street.
- ◇ Be positioned such that the closest part of the mailbox to the road is a minimum of 12" but no more than 18" from the curb at the street (See picture). Note: The measurement should be taken from the handle or other protrusion. This distance can easily be measured by taping a 4' string with a weight to the end of a one-foot ruler and holding the other end of the ruler against the front of the mailbox. Simply check to see if the weight is hanging over the curb or the street gutter. If over the street gutter, the mailbox is too close and needs to be moved back until the weight touches the face of the curb.
- ◇ All mailboxes should have a handle, a flag and the house number on the right hand side as you face it.

If your mailbox doesn't measure up to the standards, please make the necessary changes prior to December 1st. Mailboxes in violation of the minimum setback requirements that are not relocated by December 1st will not be repaired or replaced if damaged by snowplowing activities. All mailboxes replaced by the City of Beloit will be replaced with a standard wooden post and box according to postal regulations.

The Beloit Postmaster would like to remind everyone, including customers with mail receptacles on their homes, approaches to ALL mailboxes need to be clear of ice and snow.

Your cooperation is greatly appreciated as we strive to serve you better. If you have questions, please call the City's Public Works Operations Director, Christine Walsh at 364-2929 or the Postmaster, Jerry Deppisch at 365-7755.



Wisconsin Uniform Dwelling Code Energy Worksheet

Instructions: This worksheet is a Safety & Buildings Division (S&BD)-approved method of manually showing compliance with the energy conservation and heating equipment sizing requirements of the Uniform Dwelling Code (UDC), for new dwelling permits submitted on or after May 1, 1999. It may be necessary for the user to purchase a copy of the UDC from State Document Sales, (608)266-3358. Additional information is printed in the UDC Commentary, which is available for a fee, as are blank copies of this form, from S&BD at POB 2509, Madison, WI 53701, Tel. 608-267-4405. Earlier editions of this worksheet may NOT be used. Numbers in brackets, [1], refer to the footnotes printed on page 2.

You may also submit completed worksheets from the computer program *MBCcheck* (formerly *WIScheck*), which is available for free downloading from <http://www.energycodes.org/> on the Internet.

A required **U-value** is the maximum acceptable heat transmittance for an element. A required **insulation R-value** is the minimum acceptable level of resistance to heat transmittance. (U-values and R-values are reciprocals of each other.) If a component includes two or more areas of different insulation levels, either use the less insulating value for both areas, or use the Optional Weighted Average table in the **Prescriptive Package Method** section or enter separate areas and insulation values in the **System Design Method**. All "U" values must be carried to four places after the decimal point, rounded to three places. Other values may be rounded to the whole number.

Window and door U-values must be tested and documented by the manufacturer in accordance with the National Fenestration Rating Council (NFRC) test procedures or be taken from the glazing U-value table in s. Comm 22.05. Center-of-glass U-values cannot be used. If a door contains glass, and an aggregate U-value rating for that door is not available, then include the glass area of the door with your windows and use the opaque door U-value to determine compliance of the door.

A **slab-on-grade** is an earth-supported floor slab that is above, or less than 12" below, adjacent grade.

High-efficiency heating equipment is given a credit by the code. "High-Efficiency" means a furnace or boiler with an AFUE of 90% or more, or a heat pump with an HSPF of 7.8 or more without the use of electric resistance backup heat of greater than 3 kilowatts. If you plan to install more than one piece of heating equipment, the equipment with the lowest efficiency must meet or exceed the efficiency required by the selected package.

Choice of Method: You have the choice of using the **Prescriptive Package Method** or the **System Design Method** to show code compliance. For the simpler **Prescriptive Package Method**, which is recommended for standard designs, complete Sections **A., B., F., and G.** Instructions are on page 2. You will be first calculating component areas, then comparing your planned insulation levels to the required insulation levels of the **Prescriptive Packages**. You will then calculate infiltration and ventilation heat losses to size your heating equipment. If you cannot comply with one of the prescriptive packages, you may be able to show compliance by the **System Design Method**.

For the **System Design Method**, which is recommended for alternative designs in which more insulation is installed in one component to offset less in another, complete Sections **A., C., D., E., F. and G.** You will be first calculating component areas, then a code-allowed heat loss factor, then component U- and R-values and then your calculated heat loss factor which you will compare to the code-allowed heat loss factor. You will then calculate infiltration and ventilation heat losses to size your heating equipment.

The **County Zone Table** below is use for determining the temperature difference for sizing your heating plant in Section G. You may submit to your local code official more exact calculations to size your heating equipment.

| Zone 1 - 95 degrees | Zone 2 - 90 degrees | Zone 3 - 85 degrees | Zone 4 - 80 degrees |
|--|---|---|---|
| Ashland, Barron, Bayfield, Burnett, Chippewa, Douglas, Dunn, Florence, Forest, Iron, Lincoln, Oneida, Pierce, Polk, Price, Rusk, Saint Croix, Sawyer, Taylor, Vilas, Washburn | Adams, Buffalo, Clark, Eau Claire, Jackson, Juneau, LaCrosse, Langlade, Marathon, Marinette, Menominee, Monroe, Portage, Shawano, Oconto, Pepin, Trempeleau, Vernon, Waupaca, Wood | Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Kewaunee, LaFayette, Manitowoc, Marquette, Outagamie, Richland, Sauk, Sheboygan, Waushara, Winnebago | Jefferson, Kenosha, Milwaukee, Ozaukee, Racine, Rock, Walworth, Washington, Waukesha |

Detailed Instructions for Section B. Prescriptive Package Method:

R-value requirements are for insulation only and do not include structural components.

For a component with two or more areas of different insulation levels, either use the least insulating value for both areas or use the Weighted Average tables on page 4.

Wall R-values represent the sum of the wall cavity insulation plus insulating sheathing, if used. Do not include exterior siding, structural sheathing or interior drywall. For example, an R-20 requirement could be met *EITHER* by R-15 cavity insulation plus R-5 sheathing *OR* R-13 cavity insulation plus R-7 sheathing. Note that there are separate tables for walls with structural sheathing only and for walls with insulating sheathing. To use a table for insulating sheathing, the sheathing used must be at least R-4, except that at least R-2 insulation may be provided over corner bracing. Table wall R-Values apply to wood-frame or mass (concrete, masonry, log) wall assemblies, but not to metal-frame construction. If metal frame is planned, use the adjusted R-Values from the Metal-Frame Wall Tables of the UDC Appendix. Table wall values apply to boxsills.

Ceiling R-values represent the sum of the cavity insulation plus insulating sheathing, if used. For ventilated ceilings, any insulating sheathing must be placed between the conditioned space and the ventilated portion of the roof. Ceiling R-values with "RT" indicates that a raised-heel truss or oversized truss construction must be used so that the insulation achieves the full insulation thickness over the exterior walls.

"Floor" requirements apply to floors over unconditioned spaces (such as un-insulated crawlspaces, basements and garages). Other floors that are over outside air shall have a $U_{\text{overall}} = 0.033$ or R-30 added insulation.

"Heated-Slab" requirements apply to slabs that contain heat ducts or pipes. All slab insulation must extend at least 48 inches either 1) down from the top of the slab, or 2) down from the top of the slab to the bottom of the slab and then horizontally underneath the slab, or 3) down from the top of the slab to the bottom of the slab and then horizontally away from the slab, with pavement or at least 10 inches of soil covering the horizontal insulation.

Walls of basements below un-insulated floors must be insulated from the top of the basement wall to the level of the basement floor. Conditioned basement windows and glass doors must be included with the other glazing. Exterior basement doors must meet the door U-value requirements. If more than 50% of the basement is exposed, then all of the basement walls must instead meet the above-foundation wall requirements.

Crawl space wall R-value requirements are for walls of unventilated crawlspaces. The crawlspace wall insulation must extend from the top of the wall (including the sill plate) to at least 12 inches below the outside finished grade. If the distance from the outside finished grade to the top of the footing is less than 12 inches, the insulation must extend vertically downward plus horizontally for a total distance of 24 inches from the outside finished grade.

Footnotes for worksheet:

- [1] Opaque wall area is wall area minus opening areas of doors and windows.
- [2] These below-grade U-values have the insulating value of the soil added to the code-required U-values which apply to the building materials only. See Sect. D.2. for typical insulated component U-values.
- [3] These slab-on-grade F-values are derived from the code-required U-values and include the heat loss through the edge and body of the slab. See Sect. D.2.
- [4] For building additions, show that the existing heating equipment, if used to heat the addition, is large enough. To do so, you must calculate the heat loss of the whole building.
- [5] If desired manufacturer does not have a furnace of this size, then a designer may select the manufacturer's next larger size.

Submit completed worksheet pages 3-6 with dwelling plans to local enforcing municipality.

Project Address: _____

Builder: _____ Owner: _____

Worksheet Completed By: _____ Date: _____

Does dwelling unit have three kilowatts or more input capacity of permanently installed electrical space heating equipment?
 YES (see below) NO

You will need to apply the stricter standards shown for electrically-heated homes if you answered "YES" to the above question.

A. Area Calculations Enter appropriate dimensions to obtain area values. Some calculations will not be necessary depending on home design or calculation method. These calculated areas are referenced elsewhere on this worksheet, for example, "(A.1.)".

| | |
|--|--|
| <p>1. Window, Skylight & Patio Door Area (overall unit area) a. In Above-Foundation Walls b. In Foundation Walls</p> <p>_____ sq. ft. _____ sq. ft.</p> <p>c. Total (a. + b.) = _____</p> | <p>2. Opaque Door Area a. In Above-Foundation Walls b. In Foundation Walls</p> <p>_____ sq. ft. _____ sq. ft.</p> <p>c. Total (a. + b.) = _____</p> |
| <p>3. Gross Exposed Basement Wall Area</p> <p>_____ sq. ft.</p> | <p>4. Basement Wall Area Below Grade</p> <p>_____ sq. ft.</p> |
| <p>5. Opaque [1] Basement Wall Area (A.3. + A.4. - A.1.b. - A.2.b.)</p> <p>_____ sq. ft.</p> <p>If the exposed area of A.3. is greater than the below grade area of A.4., add A.5. to A.7 and cross out the number in this cell.</p> | <p>6. Gross Heated Above-Foundation Wall Area, including boxesill</p> <p>_____ sq. ft.</p> |
| <p>7. Above Foundation Code Wall Area (A.6. + A.1.b. + A.2.b.)</p> <p>_____ sq. ft.</p> | <p>8. Opaque [1] Above-Foundation Wall Area (A.6. - A.1.a. - A.2.a.)</p> <p>_____ sq. ft.</p> |
| <p>9. Floor Area Over Interior Unconditioned Spaces Less Than 50°</p> <p>_____ sq. ft.</p> | <p>10. Insulated Roof Or Ceiling (less skylights)</p> <p>_____ sq. ft.</p> |
| <p>11. Floor Over Outside Air (Overhangs)</p> <p>_____ sq. ft.</p> | <p>12. Crawl Space Wall Area</p> <p>_____ sq. ft.</p> |
| <p>13. Slab On Grade (above or less than 12 inches below grade)</p> <p>_____ lineal feet of slab perimeter</p> | <p>14. Total Heated Envelope Area (A.5 + A.7 + A.9 + A.10 + A.11 + A.12 + (A.13. × 2'))</p> <p>_____ sq. ft.</p> |
| <p>15. Percent Glazing (for Prescriptive Package Method, Section B, only) (A.1.c. + A.7. × 100%)</p> <p>_____ %</p> | <p>16. Windows Description - Above-Foundation Windows: Frame type: <input type="checkbox"/> Wood or Wood Clad <input type="checkbox"/> Vinyl <input type="checkbox"/> Metal Glazing type: <input type="checkbox"/> Dual <input type="checkbox"/> Triple <input type="checkbox"/> Dual w/storm panel Dual-Glazing Air Space: <input type="checkbox"/> 1/4" <input type="checkbox"/> 3/8" <input type="checkbox"/> 1/2" or more Features: <input type="checkbox"/> Low-E <input type="checkbox"/> Argon-filled <input type="checkbox"/> Suspended film Foundation Windows: <input type="checkbox"/> Vinyl <input type="checkbox"/> Metal</p> |

B. Prescriptive Package Method (Skip this section if using the System Design Method of Sections C-F)

The prescriptive package method is the simplest method for determining compliance with the UDC insulation and window requirements. To use the prescriptive package method, enter your actual design values in the "Actual" row below. For a component, with two or more areas of different insulation levels, such as windows, either use the least insulating value for both areas or use the Weighted Average tables below. Multiply your % glazing by the glazing U-value to obtain your "Glazing Factor". Find the Prescriptive Table that applies to your space heating fuel and sheathing type. Select a package from the table that most closely matches the construction indicated on your plans. Do not exceed the package U-values or glazing factor or fall below the package R-values with your design. Transfer the R-Values and U-values to the blank table below in the "Allowed" row. Then proceed to Section F. See page 2 for detailed instructions for this section.

| | Package # | % glazing | U glazing | Glazing Factor (% glazing x U glazing) | R wall | R ceiling | R Bsmt, Crawl Space, Slab or Floor | U door | U overall | Equip. Eff. |
|---------|-----------|-----------|-----------|---|--------|-----------|------------------------------------|--------|-----------|-------------|
| Actual | ----- | % (A.15) | | | | | | | ----- | |
| Allowed | | ----- | ----- | | Max | Min | Min | Min | Max | |

(Please go to Section F.)

Optional R-Value/U-Value Weighted Average Table for Component:

| Component Construction Description | R Value | U-Value (1+R Value) | Area (sq ft) | U-Value x Area (UA) |
|------------------------------------|---------|------------------------|-----------------|------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | Total Area = | Total UA = |

$$\frac{\text{(Total UA)}}{\text{(Total Area)}} + \frac{\text{(Total UA)}}{\text{(Total Area)}} = \text{(Weighted Average U-Value (for windows or doors))}$$

$$\frac{\text{(Total Area)}}{\text{(Total UA)}} + \frac{\text{(Total Area)}}{\text{(Total UA)}} = \text{(Weighted Average R-Value (for all other components))}$$

Optional R-Value/U-Value Weighted Average Table for Component:

| Component Construction Description | R Value | U-Value (1+R Value) | Area (sq ft) | U-Value x Area (UA) |
|------------------------------------|---------|------------------------|-----------------|------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | Total Area = | Total UA = |

$$\frac{\text{(Total UA)}}{\text{(Total Area)}} + \frac{\text{(Total UA)}}{\text{(Total Area)}} = \text{(Weighted Average U-Value (for windows or doors))}$$

$$\frac{\text{(Total Area)}}{\text{(Total UA)}} + \frac{\text{(Total Area)}}{\text{(Total UA)}} = \text{(Weighted Average R-Value (for all other components))}$$

C. Code-Allowed Heat Loss For System Design Method

Enter area values from Section A as notated and temperature differences per footnote 2 into this table and then multiply across by the electric or non-electric code-required U-value. Total the right column to find the total allowed heat loss factor.

| Component | Area From Sect A. | × Required U-Value | | = Heat Loss UA |
|---|--|-----------------------------------|-----------------------------------|-------------------|
| | | <input type="checkbox"/> NON-ELEC | <input type="checkbox"/> ELECTRIC | |
| 1. Opaque Basement Wall [2] | (A.5.) | 0.077 | 0.077 | |
| 2. Above Foundation Code Wall | (A.7.) | 0.110 | 0.080 | |
| 3. Floor Over Interior Unconditioned Space | (A.9.) | 0.050 | 0.050 | |
| 4. Roof or Ceiling | (A.10.) | 0.026 | 0.020 | |
| 5. Floor Over Exterior | (A.11.) | 0.033 | 0.033 | |
| 6. Crawl Space Wall | (A.12.) | 0.060 | 0.060 | |
| 7. Slab On Grade[3] | <input type="checkbox"/> Unheated <input type="checkbox"/> Heated | 0.72 'F' | 0.68 'F' | |
| | (A.13.) Lin. ft. | 0.70 'F' | 0.68' F' | |
| 8. Subtotal | | | | |
| 9. Credit for High Efficiency Heating Plant: 1.18 for furnace or boiler ≥90% AFUE; 1.15 for heat pump ≥ 7.8 HPSF, Otherwise use 1.0 | | | | × |
| 10. | Total Code-Allowed Heat Loss Factor | | | |

D. System Design Method - Actual 'U' Values Of Your Home's Components

D.1. Above-Foundation Components - If applicable, check the appropriate typical component constructions listed below, and use the pre-calculated U values. If your wall construction is not listed, you may obtain a pre-calculated U value from the default U-Value tables in the UDC Appendix. (Note that the default Table 2 Wood Frame U-values assume no insulating sheathing which penalizes you if your wall does have insulating sheathing, then you may need to use the Manual Calculation section below.) If you are using exterior metal framing, then you must use the Metal-Frame Wall U-Values of the UDC Appendix. If your component construction is not listed here or in the default tables, you need to use the Manual Calculation section below to manually enter R-values for the different layers of building materials from the Typical Thermal Properties of Building Materials Table of the UDC Appendix, ASHRAE Fundamentals Manual or manufacturer's specifications. Total them across and then obtain the U-value by taking the reciprocal (1/R) of the total R-value.

| Above-Foundation Walls | <input type="checkbox"/> 2X4, 16" O.C., R-13 batt, R-1 board: U - .079 | <input type="checkbox"/> 2X4, 16" O.C., R-13 batt, R-5 board: U - .061 | | | | | | | | | |
|---|---|--|-------------|-------------------------|-----------|------------------|--------------------------|-----------------|----------------|---------------|---------------|
| | <input type="checkbox"/> 2X6, 16" O.C., R-19 batt, R-1 board: U - .059 | <input type="checkbox"/> 2X6, 16" O.C.; R-19 batt, R-5 board: U - .049 | | | | | | | | | |
| <input type="checkbox"/> Other - describe: | U - _____ from Default Table | | | | | | | | | | |
| Roof or Ceiling | <input type="checkbox"/> 2X4 truss, 24" O.C., with R-38 insulation: U - .030 | <input type="checkbox"/> 2X4 truss, 24" O.C., with R-52 insulation: U - .025 | | | | | | | | | |
| | <input type="checkbox"/> 2X12 cathedral ceiling, 16" O.C., with R-38 insulation: U - .027 | | | | | | | | | | |
| <input type="checkbox"/> Other - describe: | U - _____ from Default Table | | | | | | | | | | |
| Floor Over Outside Air or Unconditioned Space | <input type="checkbox"/> 2X10 joists, 16" O.C., R-19 batt: U - .047 | | | | | | | | | | |
| <input type="checkbox"/> Other - describe: | U - _____ from Default Table | | | | | | | | | | |
| Manual U-Value Calculation (if assembly not listed above) | | | | | | | | | | | |
| Component Name | Cavity Or Solid If Applicable | Ext. Air Film* | Ext. Finish | Insulation Over Framing | Sheathing | Framing Or Solid | Insulation Within Cavity | Interior Finish | Int. Air Film* | Total R-Value | U-Value (1/R) |
| | Cavity | | | | | | | | | | |
| | Solid | | | | | | | | | | |
| | Cavity | | | | | | | | | | |
| | Solid | | | | | | | | | | |

* Air Film R-Values

| Location | Heat Flow Direction | | |
|----------|---------------------|------------|-----------|
| | Upwards | Horizontal | Downwards |
| Exterior | .17 | .17 | .17 |
| Interior | .61 | .68 | .92 |

D.2. Foundation And Slab-On-Grade Components - Check appropriate boxes for planned type of construction to determine pre-calculated overall 'U-value' including air films, wall, insulation, soil and cavity/solid differences. Slab on grade R-values are per lineal foot of slab perimeter.

| Component Type | U-Value | |
|--|----------|-------------|
| | Basement | Crawl Space |
| <input type="checkbox"/> Masonry or concrete wall without insulation | 0.360 | 0.477 |
| <input type="checkbox"/> Masonry or concrete wall with R-5 insulation board for full height | 0.115 | 0.136 |
| <input type="checkbox"/> Masonry or concrete wall with R-10 insulation board or R-11 insulation batt and 2X4's for full height | 0.072 | 0.081 |
| <input type="checkbox"/> Permanent wood foundation with R-19 batt for full height | 0.054 | 0.059 |
| <input type="checkbox"/> Basement or crawl space floor without insulation | 0.025 | 0.025 |
| Slab-On-Grade (or within 12" of grade) | R-Value | |
| <input type="checkbox"/> Slab-on-grade without insulation | 1.04 | |
| <input type="checkbox"/> Slab-on-grade with R-5 insulation for 48" total horizontal and vertical application | 0.74 | |
| <input type="checkbox"/> Slab-on-grade with R-10 insulation board for 48" total application | 0.68 | |

D.3. Windows And Doors - Use manufacturer's specifications for window and glazed door values, if they were determined per NFRC Std 100, to enter into Table E. Otherwise see default tables of UDC s. Comm 22.05 for U-values.

E. System Design Method - Calculated Envelope Heat Loss Factor Of Your Home

Enter values into table from elsewhere on this worksheet and multiply across to find the actual heat loss factor of each component. If using pre-calculated component U-values, do not calculate separate cavity and solid figures or apply wood frame factors. Total component heat loss factors in right column to find total envelope heat loss factors.

| Component | Cavity Or Solid If Applicable | Area From Sect. A. | × Wood Frame Factor** | × Actual 'U' Value From Sect. D | = Heat Loss Factor (UA) |
|---|-------------------------------|--------------------|-----------------------|---------------------------------|-------------------------|
| Above-Foundation Windows | ----- | (A.1.a.) | ----- | | |
| Foundation Windows | ----- | (A.1.b) | ----- | | |
| Doors | ----- | (A.2.c) | ----- | | |
| Opaque Basement Wall | ----- | (A.5.) | ----- | | |
| Opaque Above-Foundation Wall | Cavity | (A.8.) | ----- | ----- | ----- |
| | Solid | | | | |
| Floor Over Unconditioned Spaces | Cavity | (A.9.) | ----- | ----- | ----- |
| | Solid | | | | |
| Roof or Ceiling | Cavity | (A.10.) | ----- | ----- | ----- |
| | Solid | | | | |
| Floor Over Outside Air | Cavity | (A.11.) | ----- | ----- | ----- |
| | Solid | | | | |
| Crawl Space Wall | ----- | (A.12.) | ----- | | |
| Slab On Grade | ----- | (A.13.) Lin. ft. | ----- | F-Value | |
| Total Calculated Envelope Heat Loss Factor- Not to exceed Total Code Allowed Heat Loss Factor of line 10 of Section C. (Enter here: _____) by more than 1% | | | | | |

** Adjustment Factors For Wood-Framed Components - Do not apply if your are using a pre-calculated or default U-Value.

| Spacing Of Framing Members | Stud Walls | | Joists/Rafters | |
|----------------------------|------------|-------|----------------|-------|
| | Cavity | Solid | Cavity | Solid |
| 12" | .70 | .30 | .86 | .14 |
| 16" | .75 | .25 | .90 | .10 |
| 24" | .78 | .22 | .93 | .07 |

F. Heat Loss Factor Due to Air Infiltration (for heating equipment sizing)

Enter appropriate values. A maximum infiltration air change rate of 0.5 per hour is allowed in addition to exhaust fan ventilation losses.

| Floor Level | Area (sq ft) | × Height (ft) | Fan Capacity (cfm) | × Constant | × Air Changes Per Hour | = Heat Loss Factor(UA) |
|--|--------------|---------------|--------------------|------------|------------------------|------------------------|
| Basement | | | ----- | .018 | | |
| Level 1 | | | ----- | .018 | | |
| Level 2 | | | ----- | .018 | | |
| Level 3 | | | ----- | .018 | | |
| Exhaust Fan Ventilation | | | | .432 | | |
| Total Infiltration & Ventilation Heat Loss Factor | | | | | | |

G. Heating Equipment Sizing

Enter appropriate value to determine the maximum and minimum allowable heating equipment capacity in BTUs/HR. A more detailed calculation may be submitted to the local code official. [4]

| | | | | | |
|--|---|---|-----------------------------|---|--------|
| Prescriptive Package Method: | U overall from selected Prescriptive Package of Section B | × | Total Envelope Area (A.14.) | = | |
| OR System Design Method: Calculated Heat Loss Factor from Sect. E. | | | | | |
| Infiltration & Ventilation Heat Loss Factor (from Sect. F.) | | | | | + |
| Total Heat Loss Factor (UA): | | | | | = |
| Temperature Difference from County Zone Table on page 1 | | | | | × |
| Minimum Heating Equipment Output | | | | | = |
| Allowable Heating Equipment Size Margin Multiplier | | | | | × 1.15 |
| Maximum Allowable Heating Equipment Output [5] | | | | | = |
| Planned Furnace Output Or Boiler IBR Rating | | | | | |
| Make & Model if High Efficiency Credit has been taken: | | | | | |

Prescriptive Package Tables (Corrected)

(See notes on page 2 of Energy Worksheet; I = insulating sheathing, RT = raised heel roof truss)

Table B-1 Prescriptive packages, Non-electric Heat, Structural Sheathing only

| Package | Glazing Factor | R wall | R ceiling | R basement | U door | U overall | HVAC Equipment Efficiency |
|---------|----------------|--------|-----------|---------------|--------|-----------|---------------------------|
| 1 | 0.0370 | R21 | R42 | R7 | 0.35 | 0.073 | Normal |
| 2 | 0.0264 | R21 | R51, RT | R5 | 0.35 | 0.073 | Normal |
| 3 | 0.0333 | R15 | R42 | R10 | 0.35 | 0.073 | Normal |
| 4 | 0.0440 | R19 | R33 | R10 | 0.35 | 0.073 | Normal |
| 5 | 0.0330 | R13 | R42 | R11 | 0.35 | 0.073 | Normal |
| 6 | 0.0480 | R19 | R33 | R11 | 0.35 | 0.073 | Normal |
| 7 | 0.0600 | R21 | R47 | R11 | 0.35 | 0.073 | Normal |
| 8 | 0.0407 | R13 | R44 | R13 | 0.35 | 0.073 | Normal |
| 9 | 0.0600 | R19 | R42 | R13 | 0.35 | 0.073 | Normal |
| 10 | 0.0680 | R21 | R38, RT | R13 | 0.35 | 0.073 | Normal |
| 11 | 0.0296 | R13 | R49 | R5 | 0.35 | 0.086 | High |
| 12 | 0.0440 | R19 | R30 | R5 | 0.35 | 0.086 | High |
| 13 | 0.0520 | R21 | R33 | R5 | 0.35 | 0.086 | High |
| 14 | 0.0720 | R13 | R47 | R10 | 0.35 | 0.086 | High |
| 15 | 0.0784 | R19 | R38 | R10 | 0.47 | 0.086 | High |
| 16 | 0.0640 | R13 | R33 | R11 | 0.47 | 0.086 | High |
| 17 | 0.0896 | R19 | R49 | R11 | 0.35 | 0.086 | High |
| 18 | 0.0896 | R21 | R34 | R11 | 0.35 | 0.086 | High |
| 19 | 0.0920 | R19 | R34 | R11 | 0.47 | 0.086 | High |
| 20 | 0.0840 | R13 | R49 | R13 | 0.35 | 0.086 | High |
| 21 | 0.0840 | R19 | R30 | R13 | 0.47 | 0.086 | High |
| 22 | 0.0896 | R21 | R31 | R13 | 0.47 | 0.086 | High |
| Package | Glazing Factor | R wall | R ceiling | R crawl | U door | U overall | HVAC Equipment Efficiency |
| 23 | 0.0520 | R19 | R34 | R19 | 0.47 | 0.070 | Normal |
| 24 | 0.0672 | R13 | R36 | R19 | 0.47 | 0.083 | High |
| 25 | 0.0720 | R13 | R33 | R19 | 0.47 | 0.083 | High |
| Package | Glazing Factor | R wall | R ceiling | R slab | U door | U overall | HVAC Equipment Efficiency |
| 26 | 0.0560 | R21 | R36 | R5 | 0.47 | 0.103 | Normal |
| 27 | 0.0728 | R13 | R36 | R5 | 0.47 | 0.121 | High |
| 28 | 0.0760 | R13 | R34 | R5 | 0.47 | 0.121 | High |
| Package | Glazing Factor | R wall | R ceiling | R heated-slab | U door | U overall | HVAC Equipment Efficiency |
| 29 | 0.0560 | R21 | R47 | R5 | 0.47 | 0.101 | Normal |
| 30 | 0.0728 | R13 | R42 | R5 | 0.47 | 0.120 | High |
| 31 | 0.0760 | R13 | R38 | R5 | 0.47 | 0.120 | High |
| Package | Glazing Factor | R wall | R ceiling | R floor | U door | U overall | HVAC Equipment Efficiency |
| 32 | 0.0480 | R19 | R47 | R19 | 0.35 | 0.065 | Normal |
| 33 | 0.0728 | R19 | R36 | R19 | 0.47 | 0.077 | High |
| 34 | 0.0560 | R13 | R34 | R19 | 0.47 | 0.077 | High |

Table B-2 Prescriptive packages, Non-electric Heat, Insulating Sheathing

| Package | Glazing Factor | R wall | R ceiling | R basement | U door | U overall | HVAC Equipment Efficiency |
|---------|----------------|--------|-----------|------------|--------|-----------|---------------------------|
| 35 | 0.0370 | R20, I | R42 | R7 | 0.35 | 0.073 | Normal |
| 36 | 0.0363 | R28, I | R38, RT | R5 | 0.35 | 0.073 | Normal |
| 37 | 0.0552 | R18, I | R44 | R10 | 0.35 | 0.073 | Normal |
| 38 | 0.0560 | R20, I | R47 | R10 | 0.35 | 0.073 | Normal |
| 39 | 0.0560 | R23, I | R34 | R10 | 0.35 | 0.073 | Normal |
| 40 | 0.0560 | R18, I | R47 | R11 | 0.35 | 0.073 | Normal |
| 41 | 0.0616 | R23, I | R42 | R11 | 0.35 | 0.073 | Normal |
| 42 | 0.0546 | R18, I | R44 | R11 | 0.35 | 0.073 | Normal |
| 43 | 0.0672 | R23, I | R40 | R13 | 0.35 | 0.073 | Normal |
| 44 | 0.0720 | R25, I | R36 | R13 | 0.35 | 0.073 | Normal |
| 45 | 0.0504 | R18, I | R40 | R5 | 0.35 | 0.086 | High |
| 46 | 0.0560 | R19, I | R47 | R5 | 0.35 | 0.086 | High |
| 47 | 0.0560 | R23, I | R38 | R5 | 0.47 | 0.086 | High |
| 48 | 0.0600 | R25, I | R38 | R5 | 0.47 | 0.086 | High |
| 49 | 0.0680 | R26, I | R42 | R5 | 0.35 | 0.086 | High |
| 50 | 0.0680 | R28, I | R47 | R5 | 0.47 | 0.086 | High |
| 51 | 0.0672 | R26, I | R47 | R5 | 0.35 | 0.086 | High |
| 52 | 0.0672 | R28, I | R38 | R5 | 0.35 | 0.086 | High |
| 53 | 0.0720 | R20, I | R42 | R7 | 0.47 | 0.086 | High |
| 54 | 0.0855 | R18, I | R36 | R11 | 0.35 | 0.086 | High |

| | | | | | | | |
|---------|----------------|--------|-----------|---------------|--------|-----------|---------------------------|
| 55 | 0.0896 | R23, I | R33 | R11 | 0.47 | 0.086 | High |
| 56 | 0.0861 | R18, I | R36 | R13 | 0.47 | 0.086 | High |
| 57 | 0.1000 | R23, I | R33 | R13 | 0.47 | 0.086 | High |
| Package | Glazing Factor | R wall | R ceiling | R crawl | U door | U overall | HVAC Equipment Efficiency |
| 58 | 0.0546 | R18, I | R38 | R19 | 0.47 | 0.070 | Normal |
| 59 | 0.0784 | R15, I | R30 | R19 | 0.47 | 0.083 | High |
| 60 | 0.0880 | R15, I | R38 | R19 | 0.47 | 0.083 | High |
| Package | Glazing Factor | R wall | R ceiling | R slab | U door | U overall | HVAC Equipment Efficiency |
| 61 | 0.0640 | R23, I | R36 | R5 | 0.47 | 0.103 | Normal |
| 62 | 0.0896 | R15, I | R36 | R5 | 0.47 | 0.121 | High |
| 63 | 0.0960 | R15, I | R38 | R5 | 0.47 | 0.121 | High |
| Package | Glazing Factor | R wall | R ceiling | R heated-slab | U door | U overall | HVAC Equipment Efficiency |
| 64 | 0.0640 | R23, I | R34 | R5 | 0.47 | 0.101 | Normal |
| 65 | 0.0840 | R15, I | R31 | R5 | 0.47 | 0.121 | High |
| 66 | 0.0920 | R15, I | R33 | R5 | 0.47 | 0.121 | High |
| Package | Glazing Factor | R wall | R ceiling | R floor | U door | U overall | HVAC Equipment Efficiency |
| 67 | 0.0480 | R20, I | R44 | R19 | 0.35 | 0.065 | Normal |
| 68 | 0.0728 | R20, I | R36 | R19 | 0.47 | 0.077 | High |
| 69 | 0.0560 | R14, I | R38 | R19 | 0.47 | 0.078 | High |

Table B-3 Prescriptive packages, Electric Heat, Structural Sheathing Only

| | | | | | | | |
|---------|----------------|--------|-----------|------------|--------|-----------|---------------------------|
| Package | Glazing Factor | R wall | R ceiling | R basement | U door | U overall | HVAC Equipment Efficiency |
| B 70 | 0.0396 | R21 | R37, RT | R19 | 0.35 | 0.059 | Normal |
| B 71 | 0.0429 | R21 | R42, RT | R19 | 0.35 | 0.059 | Normal |
| B 72 | 0.0520 | R21 | R49 | R13 | 0.35 | 0.068 | High |
| B 73 | 0.0640 | R19 | R42, RT | R19 | 0.35 | 0.068 | High |
| B 74 | 0.0693 | R21 | R49, RT | R19 | 0.47 | 0.068 | High |
| Package | Glazing Factor | R wall | R ceiling | R crawl | U door | U overall | HVAC Equipment Efficiency |
| B 75 | 0.0429 | R21 | R54, RT | R30 | 0.35 | 0.054 | Normal |
| B 76 | 0.0480 | R21 | R45, RT | R19 | 0.35 | 0.062 | High |
| B 77 | 0.0627 | R21 | R54, RT | R30 | 0.47 | 0.062 | High |
| Package | Glazing Factor | R wall | R ceiling | R slab | U door | U overall | HVAC Equipment Efficiency |
| B 78 | 0.0396 | R26 | R51, RT | R10 | 0.35 | 0.083 | Normal |
| B 79 | 0.0480 | R21 | R49 | R7 | 0.35 | 0.095 | High |
| B 80 | 0.0528 | R21 | R49, RT | R5 | 0.35 | 0.095 | High |
| Package | Glazing Factor | R wall | R ceiling | R floor | U door | U overall | HVAC Equipment Efficiency |
| B 81 | 0.0363 | R21 | R54, RT | R30 | 0.35 | 0.052 | Normal |
| B 82 | 0.0520 | R21 | R49 | R30 | 0.35 | 0.060 | High |
| B 83 | 0.0528 | R21 | R44, RT | R30 | 0.47 | 0.060 | High |

Table B-4 Prescriptive packages, Electric Heat, Insulating Sheathing

| | | | | | | | |
|---------|----------------|--------|-----------|------------|--------|-----------|---------------------------|
| Package | Glazing Factor | R wall | R ceiling | R basement | U door | U overall | HVAC Equipment Efficiency |
| B 84 | 0.0480 | R25, I | R48, RT | R16 | 0.35 | 0.059 | Normal |
| B 85 | 0.0495 | R25, I | R48, RT | R16 | 0.35 | 0.059 | Normal |
| B 86 | 0.0462 | R28, I | R40 | R16 | 0.35 | 0.059 | Normal |
| B 87 | 0.0429 | R25, I | R36 | R18 | 0.35 | 0.059 | Normal |
| B 88 | 0.0528 | R23, I | R58, RT | R18 | 0.35 | 0.059 | Normal |
| B 89 | 0.0462 | R25, I | R42 | R18 | 0.35 | 0.059 | Normal |
| B 90 | 0.0560 | R25, I | R46, RT | R10 | 0.35 | 0.068 | High |
| B 91 | 0.0640 | R23, I | R48, RT | R13 | 0.35 | 0.068 | High |
| B 92 | 0.0600 | R25, I | R42 | R13 | 0.35 | 0.068 | High |
| B 93 | 0.0600 | R23, I | R37 | R18 | 0.47 | 0.068 | High |
| B 94 | 0.0759 | R25, I | R46, RT | R18 | 0.47 | 0.068 | High |
| Package | Glazing Factor | R wall | R ceiling | R crawl | U door | U overall | HVAC Equipment Efficiency |
| B 95 | 0.0429 | R25, I | R48, RT | R23 | 0.35 | 0.054 | Normal |
| B 96 | 0.0520 | R23, I | R38 | R23 | 0.35 | 0.062 | High |
| B 97 | 0.0561 | R25, I | R44 | R23 | 0.47 | 0.062 | High |
| Package | Glazing Factor | R wall | R ceiling | R slab | U door | U overall | HVAC Equipment Efficiency |
| B 98 | 0.0396 | R25, I | R48, RT | R10 | 0.35 | 0.083 | Normal |
| B 99 | 0.0560 | R23, I | R44 | R7 | 0.35 | 0.095 | High |
| B 100 | 0.0594 | R25, I | R46, RT | R5 | 0.47 | 0.095 | High |
| Package | Glazing Factor | R wall | R ceiling | R floor | U door | U overall | HVAC Equipment Efficiency |
| B 101 | 0.0429 | R25, I | R46, RT | R30 | 0.35 | 0.052 | Normal |
| B 102 | 0.0560 | R23, I | R44 | R30 | 0.35 | 0.060 | High |
| B 103 | 0.0627 | R25, I | R44, RT | R30 | 0.47 | 0.060 | High |



Beloit

WISCONSIN

Street Address _____

Tax Parcel No. _____

Owner of Record _____

DRIVEWAY PERMIT

Application for Construction, Reconstruction, Alteration or Enlargement of access to public Right of Way

The undersigned applicant represents that this application is for the bona fide purpose of securing access to the above described property. It is not to be used for the purpose of parking or servicing vehicles, the advertising, storage or merchandising of goods, or for any other purpose, within the dedicated portion of a City Street.

The undersigned applicant acknowledges that the City of Beloit, notwithstanding the construction of this driveway, reserves the right to make any changes, additions, repairs, or relocations within the dedicated portion of the City street at any time. This shall include the relocation, reconstruction, widening, and maintaining of said street without compensating the owner of such private driveway for the damage or destruction of such private driveway.

The undersigned applicant, his successors or assigns, agrees to indemnify and hold harmless the City of Beloit, its officials, officers, agents and employees, against any claim or any cause of action for personal injury or property damage sustained by reason of the exercise of this permit.

The undersigned applicant acknowledges that the City of Beloit does not assume any responsibility for the removal or clearance of snow, ice, or sleet, or the opening of any windows of such material upon such portion of such driveway within the dedicated portion of the City street.

The undersigned applicant acknowledges that the City reserves the right to control or restrict the flow of traffic into and out of said driveway, including the construction of physical barriers within the traveled portion of the street to implement such controls.

The undersigned applicant certifies that he represents all parties in interest for the property involved and has read all of the above and agrees to be bound by the terms stated.

Print Name _____

Signature _____

Date _____

- Attach a drawing accurately depicting the proposed private driveway, the dimensions thereof, and a statement of the materials to be used.

Phone number at which the applicant can be reached for questions: _____

Address to which the completed Permit should be mailed: _____

Official Use Only, Do not write below this line.

Engineering Recommendation: Approve Deny

By _____

Date _____

City Engineer: Approved Denied

Signed _____

Date _____

Subject to conditions and requirements: _____

Page 1

24-Hour Notice shall be given to Engineering Division before placement of concrete/asphalt. Pre-pour inspection approval must be obtained from Engineering Division before proceeding with construction.

**Material:**

The City Engineer approves driveway approaches as follows:

On streets with existing curb and gutter: 6 inch thick WDOT Grade A concrete

Concrete driveways must be isolated from the sidewalk and from the curb with ½” thick bituminous felt expansion joint material.

On streets without curb: 2 inch thick bituminous asphalt over 6 inches of gravel.

The City Engineer reserves discretionary approval upon request for brick or other materials for historical, architectural, or aesthetic value. *Ref. 7.23(8)(a-c) & 12.09(4)n

Width:

The maximum width of a residential driveway is 20 feet measured at the sidewalk or the right of way line. The minimum is 10 feet wide. The maximum width of a commercial driveway is 30 feet measured at the sidewalk or the right of way line. The City Engineer reserves discretionary approval of a wider commercial driveway if necessary. *Ref. 11.23

Length:

The driveway approach is that portion of the driveway located in the public right of way. For the purpose of code compliance a property owner may hire a professional land surveyor to accurately determine the right of way line. Alternatively one may estimate the right of way limits based upon: found iron pins; 18 inches toward the house from the existing sidewalk; or from a table of right of way widths, surface widths, and terrace widths of the subject street. When no sidewalk exists, the applicant should request line and grade stakes to be set by the City Engineering Division.

Flare:

A driveway flare is that part of the approach that widens near the street in order to ease the turning movement of cars into the driveway. The flare should be triangular and proportional to the terrace width. An existing curb opening may be enlarged or rebuilt to accommodate the requested improvement. Suggested flare widths are as follows:

| <u>Terrace width</u> | <u>Flare width</u> |
|----------------------|--------------------|
| 3 feet or less | 1 foot each side |
| 3 to 6 feet | 2 feet each side |
| 6 to 9 feet | 3 feet each side |

In no case may the flare width exceed 4 feet for a residential drive or 5 feet for a commercial drive.

Other considerations:

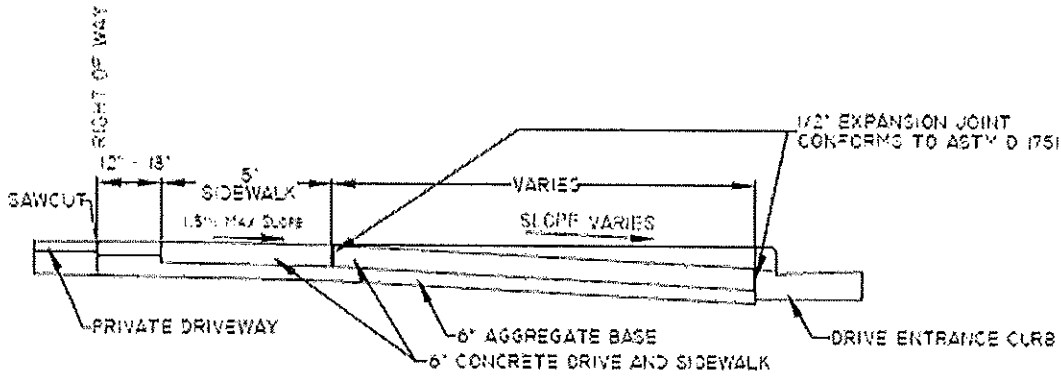
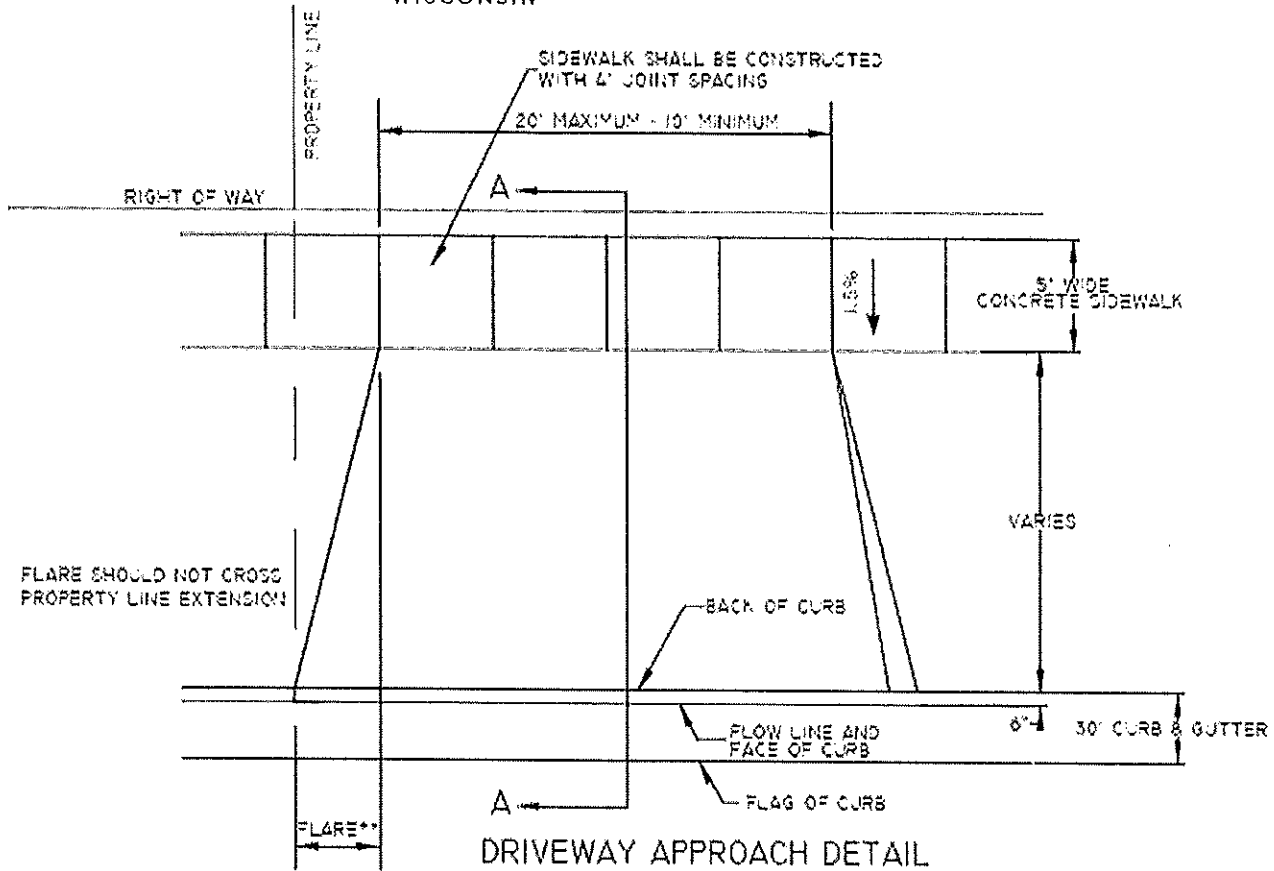
All work on driveway approaches requires a permit. Additional conditions may be imposed by the engineer upon review of the application and the site including, but not limited to: separation from other driveways and intersections; alignment and grade of driveway with respect to roadway and site improvements; conflicting utilities; and culvert pipes. Generally only one driveway is permitted for each residential lot, but a corner lot or an extra wide lot may apply for two driveways. Driveway approaches must lead to legal parking spaces. *Ref. 19.XI.3.57

24-Hour Notice shall be given to Engineering Division before placement of concrete/asphalt. Pre-pour inspection approval must be obtained from Engineering Division before proceeding with construction.



Beloit

WISCONSIN



SECTION A-A

NOTES:

12.07(12) * All sidewalks shall be at least 5 feet in width and constructed of concrete. All sidewalks shall be separated from the paved street surface by a minimum 6-foot wide grassed terrace. Sidewalks shall be located 12 to 18 inches inside the right-of-way line unless an alternative location is considered appropriate by the City Engineer.

THE MAXIMUM RESIDENTIAL FLARE IS 4 FEET, AND THE MAXIMUM COMMERCIAL FLARE IS 5 FEET.



DRIVEWAY ENTRANCE CURB



Beloit

WISCONSIN

Driveway Permit Application Checklist (for office use only)

Street Address: _____

| | Yes | No |
|--|--------------------------|--------------------------|
| Is the driveway located on a public street under the control and jurisdiction of the City? | <input type="checkbox"/> | <input type="checkbox"/> |
| Will it be constructed, reconstructed, altered or enlarged? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does application include a drawing of the proposed changes, including dimensions? | <input type="checkbox"/> | <input type="checkbox"/> |
| Will the applicant only be using the drive for access to their property? | <input type="checkbox"/> | <input type="checkbox"/> |

| City Ordinance 11.23 | | |
|---|--------------------------|--------------------------|
| Is the driveway and appurtenances within the limits of the frontage abutting the street? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there adequate sight distance? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the driveway open into an intersection or other area of traffic control? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is there a reason for the City Engineer's exception? | <input type="checkbox"/> | <input type="checkbox"/> |
| How many access points are already existing at the property? | | |
| Are the total number of driveways to the property the minimum deemed necessary for reasonable and adequate service considering safety, convenience and utility? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the driveway affect water drainage? (Highway runoff, ditches) | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a culvert needed? | <input type="checkbox"/> | <input type="checkbox"/> |
| If so, has the culvert been sized for flow? (15" minimum) | <input type="checkbox"/> | <input type="checkbox"/> |
| If so, is there 10' between the culvert and the nearest successive culvert? | <input type="checkbox"/> | <input type="checkbox"/> |
| Will the curb, gutter or sidewalk need to be modified? | <input type="checkbox"/> | <input type="checkbox"/> |
| If there is existing sidewalk, is it in acceptable condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| If there is existing sidewalk, is it likely to be damaged by vehicle traffic? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does any part of the driveway protrude into the limit of the roadway? | <input type="checkbox"/> | <input type="checkbox"/> |

| Commercial Drives: | | |
|---|--------------------------|--------------------------|
| Is the width of the driveway less than 30'? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the return radius or flare less than 5'? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the diverging angle from the roadway less than 45°? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there 30' between the driveway from another driveway serving the property? | <input type="checkbox"/> | <input type="checkbox"/> |

| Non-Commercial Drives: | | |
|--|--------------------------|--------------------------|
| Is the width of the driveway less than 20'? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the return radius less than 4'? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the diverging angle from the roadway a right angle? | <input type="checkbox"/> | <input type="checkbox"/> |

What special considerations should be made, if any?