Village of Minooka Building Guide for New Homes

Current as of May 1, 2026

NEW HOME CONSTRUCTION GUIDELINES

This packet is designed to provide information regarding the current requirements /policies for the construction of residential homes in the Village of Minooka:

1. **Application:** The application must be complete and all required documents, including Site Grading Plan, Manual J, and Res Check, along with payment for water and sewer tap-on fees, must be included for submittal. Incomplete application packets will not be accepted.

2. **Building Plans:** One complete set of paper plans as well as a PDF file is required.

3. **Energy Audit:** Must conform to 2021 Energy Conservation Codes.

4. **Engineering Review:** The Village Engineer must review and approve the site grading plan. The Engineering requirements are included in your packet.

5. **Building Codes:** Included in this packet.

6. **Plan Review:** Plan Review is a service that is included in the permit fees

7. **Public Works:** Public Works requirements are sewer, water tap, and B-Box inspections.

8. **Sidewalk Requirements:** Included in this packet.

9. **Inspections:** A full list of required inspections is included in this packet.

10. **Landscape Requirements:** Included in this packet.

VILLAGE OF MINOOKA BUILDING CODES

-International Building Code - 2018

-International Residential Code – 2018

-International Fire Code - 2021

-International Fuel Gas Code – 2018

-International Mechanical Code - 2018

-Illinois Energy Conservation Code – 2024

-International Property Maintenance Code – 2018

-International Existing Building Code - 2018

-National Electric Code – 2017

-Illinois State Accessibility Code – Current Edition

-State of Illinois Plumbing Code - Current Edition

* All current Minooka Building Codes can be viewed at Minooka.com

SITE GRADING PLAN RECOMMENDED CONTENT

Site Grading Plans submitted in support of a Building Permit Application shall include, but not be limited to, the following:

1. Building footprint with dimensions.
2. Proposed top of foundation elevation.
3. Existing topographic information for the subject lot as well as fifty (50) foot overlap on adjacent lots and right of ways.
4. Existing utility structures and appurtenances with elevations.
5. Property lines with dimensions.
6. Front yard, side yard, and rear yard setbacks.
7. All existing easements on the subject lot and adjacent to the subject lot.
8. Bench mark.
9. Overland flood routes.
10. Legal description.
11. North arrow and scale.
12. Date of preparation and subsequent revision dates.
13. Identify the entity that prepared the plan and the entity that the plan was created for.
14. Driveway location and dimensions.
15. Proposed elevations at all lot corners, changes in slope, and where shown on approved subdivision grading plan.
16. Location of existing sanitary sewer service stub.
17. Location of existing water service and B-Box.
18. Location of proposed water and sanitary sewer service routes to the building.
19. Indicate sump pump connection to storm sewer.
20. Location of existing and proposed storm sewer structures.
21. Flood prone areas shall provide 100-year flood plain elevations including top of foundation and basement floor elevations

SAMPLE BUILDING PERMIT FEES

*Estimates only, prices will vary based on area
*Water & Sewer tap-on fees shall increase by 5% annually beginning May 1, 2025. Tap-on fees are due at time of application.

Permit Fee	$0.70/square foot
Plan Review	$100.00
Public Works Inspection	$220.00
Water Meter	$405.00
Water Tap On	$5,402.00
Sewer Tap On	$5,402.00
Public Improvement Fee	$2,300.00 (varies)
Fire Department Fee	$100.00
Library Fee	$58.00
School District Impact Fees	$1,700.00 (varies)
Plumbing Inspector Fee	$220.00
Engineering Fee	$150.00
Park Fees	$4,000.00 (varies)
Traffic Signalization	$367.00

VILLAGE OF MINOOKA NEW HOME INSPECTIONS & FINAL PROCESS FOR OCCUPANCY

REQUIRED INSPECTIONS:

1. Erosion Control (Perimeter silt fence, construction entrance and storm sewer inlet protection)
2. Footing
3. Foundation
4. Backfill
5. Water and Sewer Service
6. Electrical Service
7. Underground Plumbing
8. Basement Floor
9. Garage Floor
10. Rough Framing & HVAC
11. Rough Electrical
12. Rough Plumbing (Water meter installation & stack test required)
13. Insulation & Firestopping
14. Patio & Stoops
15. Service & Village Walks
16. Driveway
17. Final Plumbing
18. Final Electrical & Heat Detector
19. Final Building
20. Final B-Box Inspection/Install Remote Water Meter Reader
21. Final Grading Survey
22. Insulation Certificate, Blower Door Test Report submitted
23. Final Payments: Engineering, Failed Inspections, Water Usage, Completion Bond
24. Occupancy Given

-Contact the Building Department at 815-467-2151 to schedule by 3:00pm the day before the required inspection. Plumbing inspections are performed on Tuesdays and Thursdays ONLY.

-Building re-inspection fee is $40.00, Plumbing re-inspection fee is $55.00

-An open-ended section of ½'' conduit shall be installed flush to the outside wall of each unit (close to the gas meter if possible) continuous to within 1 foot of the inside water meter.

-Sewer clean-outs shall be placed 5 feet from the foundation wall.

-B-Boxes poured into concrete or paved into asphalt shall be left 3 inches below final grade, protected by either a valve box top section or valve box lid marked 'WATER SERVICE'.

VILLAGE OF MINOOKA LANDSCAPE GUIDELINES

PLANTINGS

1. Tree Sizing: Shall be two (2) inches in diameter.
2. Number of Trees:
   a. Interior Lots – 2
   b. Corner Lots – 4
   c. Cul-de-sac Lots – 1
3. Location: Trees should be planted halfway between the curb and sidewalk, no less that thirty (30) feet apart, and at least ten (10) feet from all driveways, streetlights, and fire hydrants.
4. Species: All parkway trees shall be selected from the Village approved tree list.
5. Turf Grass: Shall be appropriate to suite conditions to be established by seed or sod.

APPROVED PARKWAY TREES

1. American Hackberries
2. Amur Maackia
3. Baldcypress
   a. Shawnee Brave
4. Elm
   a. Accolade, Triumph Elm
5. Ginkgo (Male only)
6. Golden Raintree
7. Honeylocust
   a. Thornless, Skyline, Shademaster
8. Hornbeam
   a. Upright European, American
9. Ironwood
10. Kentucky Coffeetree (Male only)
11. Lindens
    a. Little Leaf, Redmond American, Sterling Silver
12. Macho Amur Corktree
13. Oaks
    a. Bur, Pin, Red, Sawtooth, Scarlet, White, Swamp White
14. Sycamore
15. Tulip Tree
16. Zelkova
    a. MUSASHINO, Japanese

Village of Minooka

Construction Standards for Concrete Sidewalks

The sidewalks shall be constructed in accordance with the requirements of the Standard Specifications for Road and Bridge Construction in Illinois, latest edition; all Federal and State statutes or regulations; Village of Minooka Subdivision Regulations; in addition, the following specifications shall apply. In case of discrepancy, the Village of Minooka Subdivision Regulations shall govern.

Concrete Sidewalk Specifications

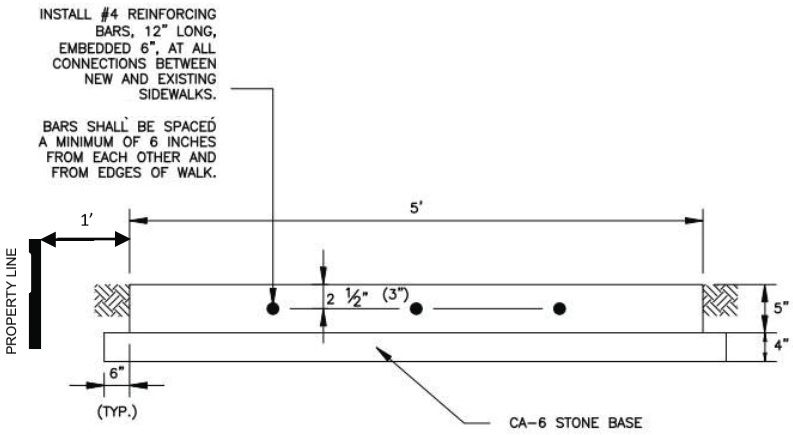
- Sidewalk shall be constructed in accordance with Section 424 of the Standard Specifications.
- Shall be four feet (4') or five feet (5') in width in residential zones as directed by the Village.
- Shall be a minimum of five inches (5") thick.
- If a public sidewalk crosses a driveway the minimum thickness shall be six inches (6") thick.
- Concrete shall be class SI.
- The base course shall be a minimum of four inches (4") thick of compacted CA-6 and shall be included in the price bid for concrete sidewalk.
- Form boards are required to be a minimum dimension of 2" x 6".
- The sidewalk shall be struck off, finished to a true and even surface with floats and trowels, leaving a smooth even surface.
- The surface shall be given a final finish by a brush drawn across the sidewalk at right angles to the edge of the walk, producing a uniform slightly roughened surface with parallel brush marks.
- The surface shall be divided by grooves constructed every five feet (5'), at right angles to the edge of the walk. These grooves shall extend to one quarter (1/4) the depth of the sidewalk and shall be no less than one eighth inch (1/8") nor more than one quarter inch (1/4") in width.
- The sidewalk shall be edged with an edging tool having a one-quarter inch (1/4") in width.
- One half-inch (1/2") full depth expansions joints consisting of preformed joint filler shall be placed between the sidewalk and adjoining sidewalks, driveways, ramps.
- Two number four ½" smooth tie bars 12" long, embedded 8" at all connections between new and existing sidewalks and ramps and curbs for 4-foot-wide sidewalks. Three number four 1/" smooth tie bars will be required for sidewalks 5-foot-wide and greater. Bars shall be spaced a minimum of 6" from each other and 12" off each edge. A ½" plastic cap shall be placed on each end of the tie bar adjacent to the expansion joint.
- An IDOT APPROVED 1600-WHITE membrane curing compound shall be used to protect the sidewalk during curing.
- Handicap sidewalk ramps shall be constructed in accordance with section 424 of the Standard Specifications. The ramp shall be Type B and shall be required where ever sidewalks or bike paths meet curb and gutter Etc., railroad crossing etc.
- Cold weather protection shall be required if the ambient air temperatures drop below 32-degrees Fahrenheit and left on until an acceptable length time to allow for curing.

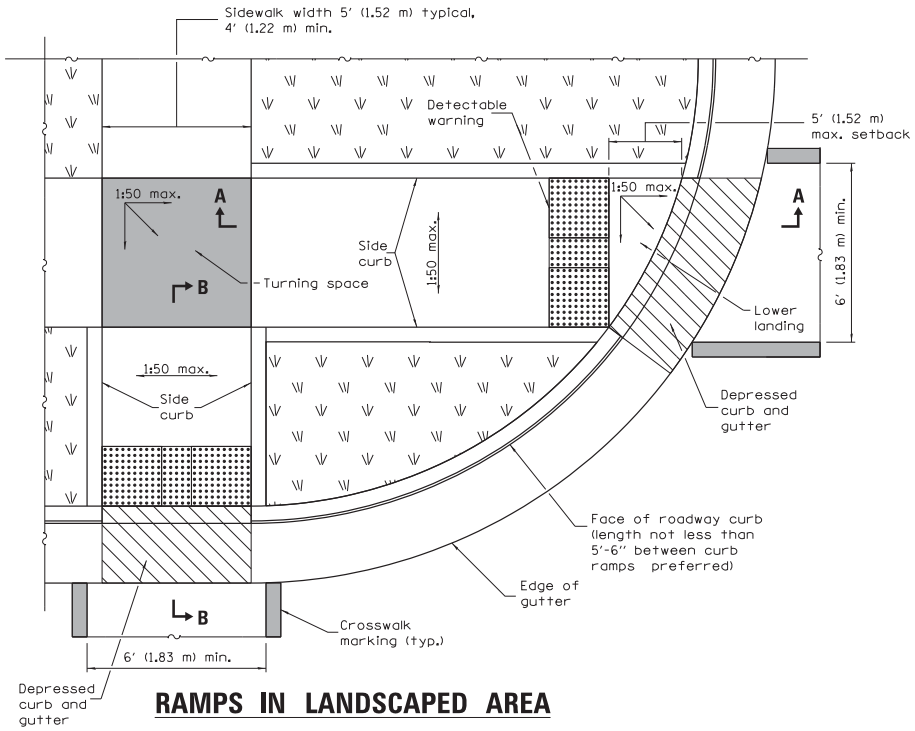
SIDEWALK

SIDEWALK CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, THE CURRENT VILLAGE CODE AND THE FOLLOWING SPECIFICATIONS.

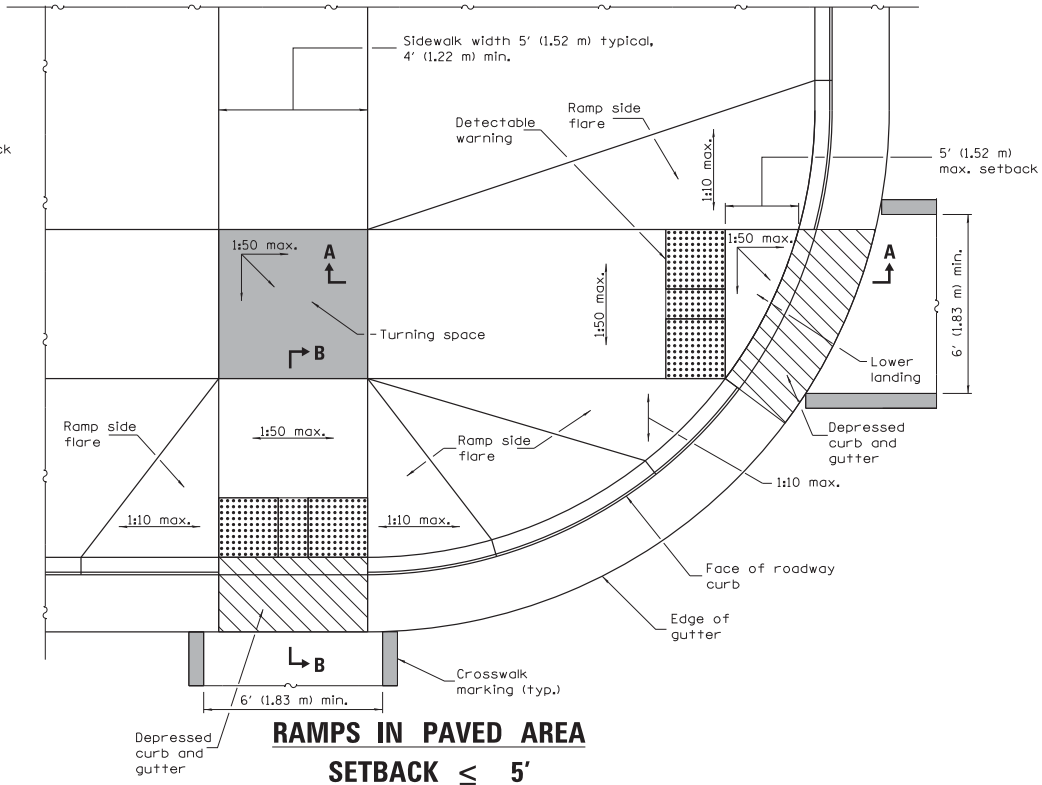
1. DIMENSION WIDTH SHALL BE 5 FEET. RESIDENTAL SUBDIVISIONS APPROVED PRIOR TO 2016 MAY HAVE SIDEWALK WIDTH OF 4 FEET IF APPROVED
2. MINIMUM SIDEWALK THICKNESS IS 5 INCHES AND ACROSS DRIVEWAYS IS 6 INCHES
3. 4 INCH AGGREGATE BASE COURSE SHALL BE COMPACTED CA-6
4. ½ INCH PREMOULDED EXPANSION JOINTS SHALL BE PROVIDED:
   - A. I AT PROPERTY LINES
   - B. I AT SIDEWALK INTERSECTIONS
   - C. I AGAINST DRIVEWAYS, CURB AND GUTTERS, AND BUILDINGS.
   - D. | OR INTERVALS EVERY 100 LINEAR FEET
5. TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 5 FOOT INTERVALS.
6. W 6 x 6 WELDED WIRE FABRIC SHALL BE USED THRU DRIVEWAY
7. TWO #4 REBAR 15 FEET LONG SHALL BE PROVIDED AT ALL UTILITY TRENCHES AND ANY LOCATION WITHIN 8 FEET OF A TREE CENTERED ON THE ROOT BALL
8. CONCRETE SHALL BE CLASS SI
9. FORMBOARD REQUIREMENTS: MINIMUM 2 INCHES X 6 INCHES
10. FIBER MESH CONCRETE WILL BE ALLOWED IN LIEU OF WELDED WIRE FABRIC IF APPROVED PRIOR TO POUR
11. MAXIMUM CROSS SLOPE IS 2% AND MINIMUM IS 0.5%
12. SIDEWALK TIE BARS SHALL CONSIST OF THREE 12 INCH X ½ INCH SMOOTH BARS WITH ½ INCH PLASTIC DOWEL CAPS ADJACENT TO THE EXPANSION JOINT THAT ARE 100MM LONG
12. AN IDOT APPROVED EQUAL 1600-WHITE MEMBRANE CURING COMPOUND SHALL BE USED TO PROTECT THE SIDEWALK DURING CURING
13. THE MAXIMUM LONGITUDINAL SLOPE ON A PUBLIC SIDEWALK SHALL BE 5.0%. WHERE 5.0% OR LESS LONGITUDINAL SLOPES CANNOT BE ACHIEVED, RAMPS MUST BE DESIGNED TO CONFORM TO THE STATE OF ILLINOIS ACCESSIBILITY CODE, THE ILLINOIS ENVIRONMENTAL BARRIERS ACT, AND ADA.
14. SIDEWALKS SHALL BE CONSTRUCTED IN A MANNER TO FACILITATE PROPER DRAINAGE, IN NO CASE SHALL SIDEWALK OBSTRUCT THE NECESSARY DRAINAGE OF THE SURROUNDING AREA
15. COLD WHEATER PROTECTION SHALL BE REQUIRED IF THE AMBIENT AIR TEMPERATURES DROP BELOW 32-DEGREES F AND LEFT ON UNTIL CURED

TIE BAR DETAIL

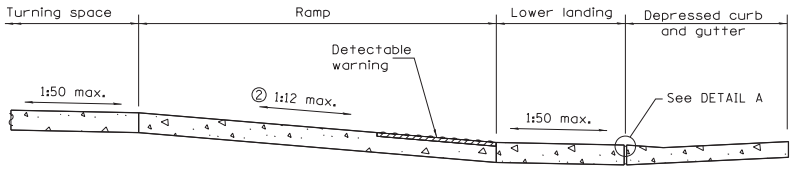




RAMPS IN LANDSCAPED AREA
SETBACK ≤ 5'

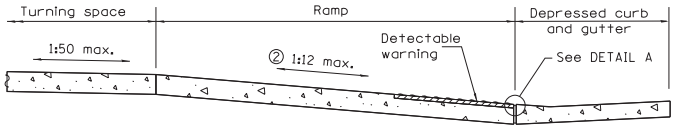


RAMPS IN PAVED AREA
SETBACK ≤ 5'



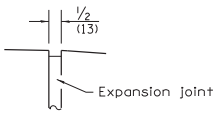
SECTION A–A

② The running slope of the curb ramp shall not require the ramp length to exceed 15' (4.5 m).

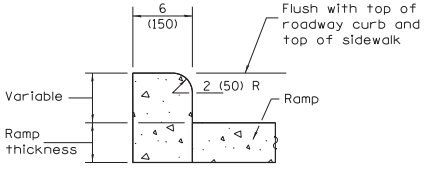


SECTION B–B

② The running slope of the curb ramp shall not require the ramp length to exceed 15' (4.5 m).



DETAIL A



SIDE CURB DETAIL

See Sheet 2 for GENERAL NOTES.

DATE	REVISIONS
1-1-17	Added 2' dimension to det.
	warnings for setbacks
	greater than 5'.
1-1-15	① not appl. to int. sidewalks.
	Rev. gen. notes. Ch'd Upper
	landing to Turning space.

PERPENDICULAR CURB RAMPS FOR SIDEWALKS

(Sheet 1 of 2)

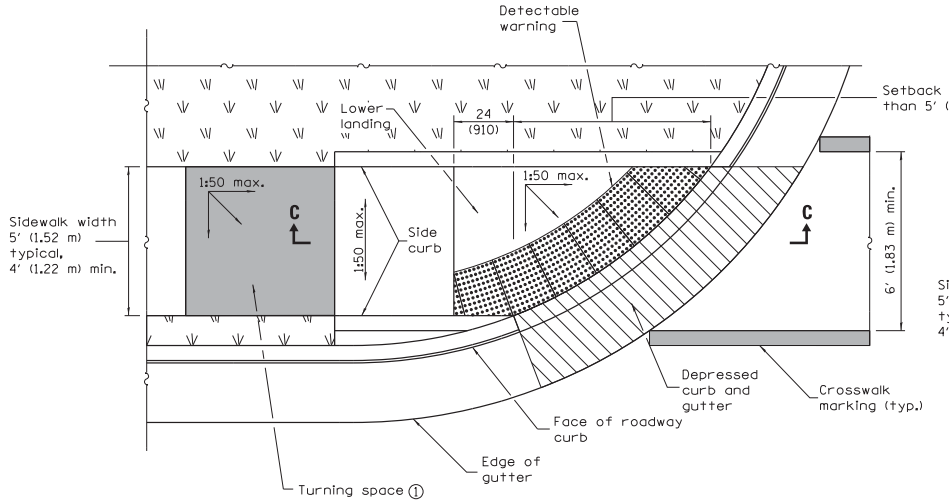
STANDARD 424001–09

Illinois Department of Transportation

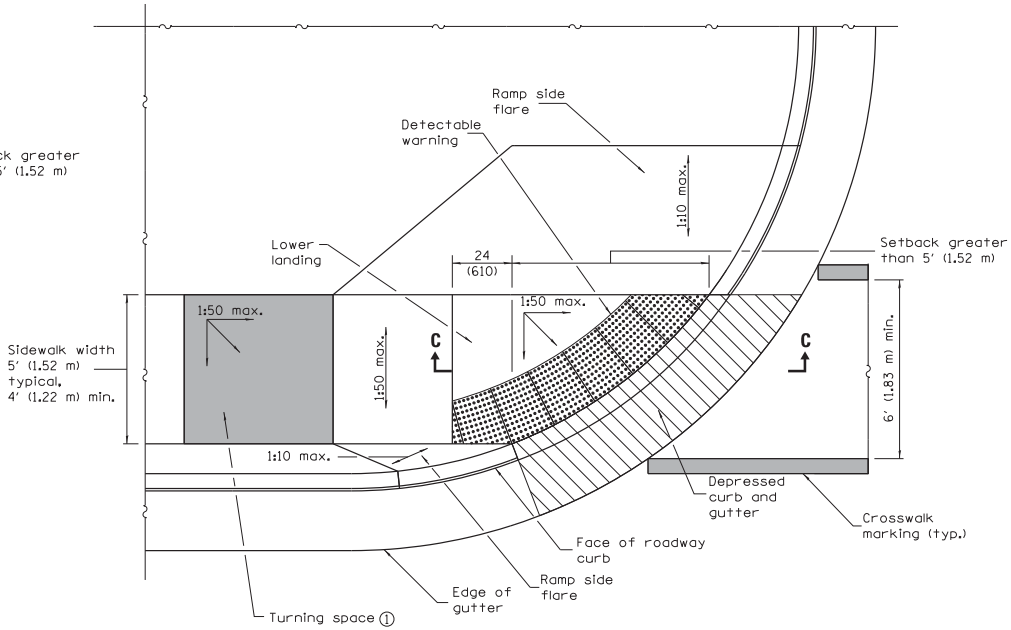
PASSED January 1, 2017
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2017
ENGINEER OF DESIGN AND ENVIRONMENT

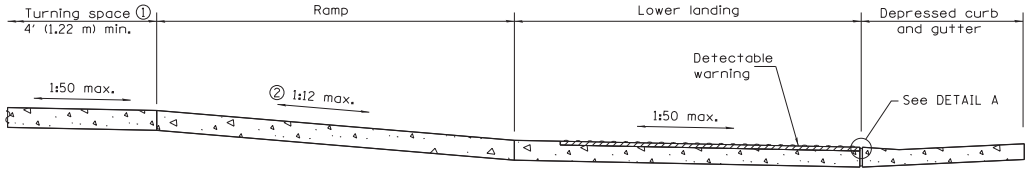
ISSUED 1-1-97



RAMP IN LANDSCAPED AREA
SETBACK > 5′



RAMP IN PAVED AREA
SETBACK > 5′



SECTION C–C

① Turning space not required for ramp slopes flatter than 1:20.

② The running slope of the curb ramp shall not require the ramp length to exceed 15′ (4.5 m).

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5′ (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2017
Michael Brand
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2017
Maureen M. Bress
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

PERPENDICULAR CURB RAMPS FOR SIDEWALKS

(Sheet 2 of 2)

STANDARD 424001–09

Village of Minooka

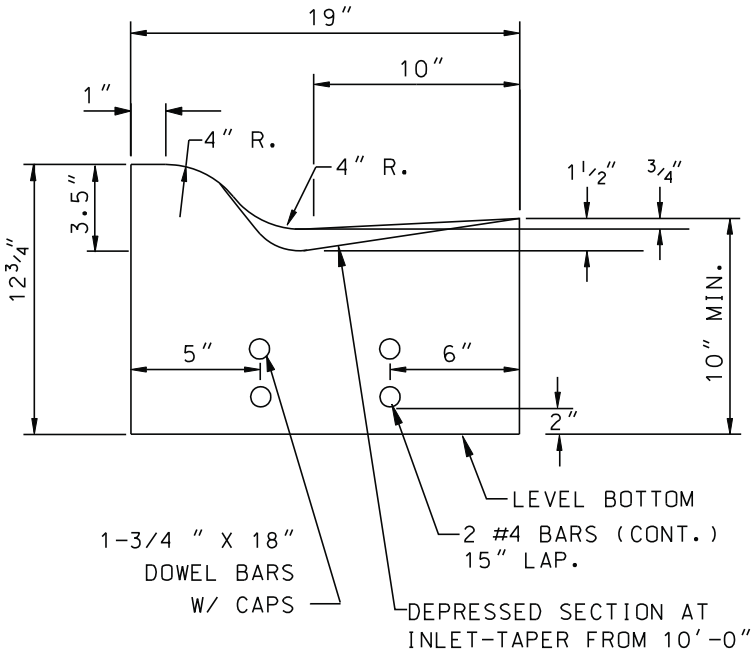
Construction Standards for Curb and Gutter

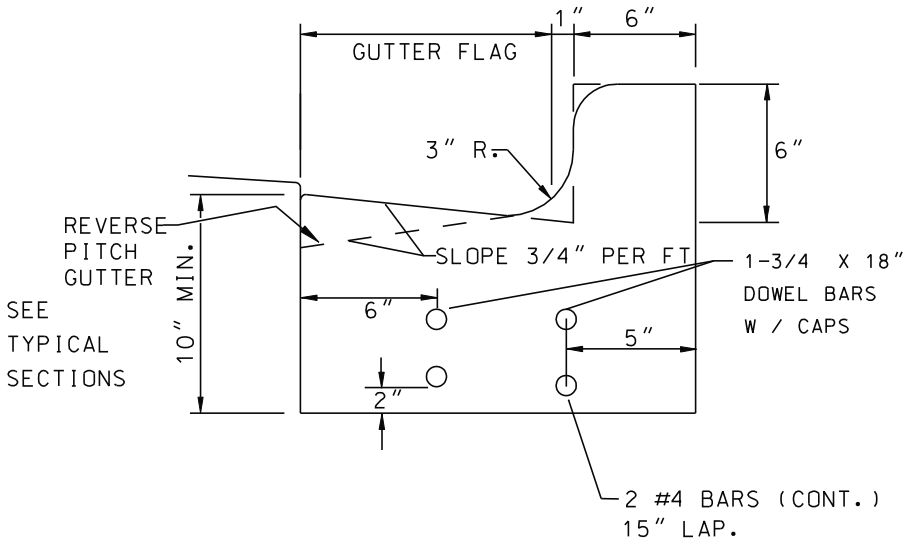
The curb shall be constructed in accordance with the requirements of the Standard Specifications for Road and Bridge Construction in Illinois, latest edition; all Federal and State statutes or regulations; Village of Minooka Subdivision Regulations; in addition, the following specifications shall apply. In case of discrepancy, the Village of Minooka Subdivision Regulations shall govern.

Concrete Curb Specifications

- Concrete Curb and Gutter shall be constructed in accordance with Section 606 of the Standard Specifications.
- Shall be barrier curb & gutter Concrete Curb Type B-6.12.
- Concrete shall be class SI.
- The base course shall be a minimum of eight inches (4") thick of compacted CA-6. The aggregate base shall be compacted in no more than four inch (4") lifts and shall be included in the price bid for concrete curb.
- Form boards are required to be a minimum dimension of 2" x 10" front boards and 2" x 12" back boards
- Two number four (#4) re-bar shall be laid continuous throughout the curb, lapping fifteen inches (15") over the other bar and wire tied together.
- Two number six ¾" x 18" long dowel bars with caps between all new and existing connections.
- The surface shall be given a final finish by a brush drawn across the curb at right angles to the edge of the curb, producing a uniform slightly roughened surface with parallel brush marks.
- A control joint shall be saw cut every fifteen feet (15'), at right angles to the front and rear edge of the curb. These cuts shall extend to one quarter (1/4) the depth of the curb and shall be no less than one eighth inch (1/8") nor more than one quarter inch (1/4") in width.
- After the control joints are cut a rubberized caulk shall be applied to each control joint.
- One three-quarter-inch (3/4") full depth expansions joints consisting of preformed joint filler shall be placed between all connections between new and existing curb and gutter.
- One half-inch (1/2") full depth expansion joints consisting of preformed joint filler shall be placed between all connections between curb and ramps.
- An IDOT APPROVED 1600-WHITE membrane curing compound shall be used to protect the curb during curing.
- Handicap sidewalk ramps shall be constructed in accordance with section 424 of the Standard Specifications. The ramp shall be Type B and shall be required where ever sidewalks or bike paths meet curb and gutter Etc., railroad crossing etc.
- Cold weather protection shall be required if the ambient air temperatures drop below 32-degrees Fahrenheit and left on until an acceptable length time to allow for curing.

COMBINATION CONCRETE CURB & GUTTER





MOUNTABLE CURB & GUTTER (M-3.12)

BARRIER CURB & GUTTER

FORMBOARD REQUIREMENT:
MINIMUM OF 2" X 10" FRONT, 2" X 12" BACK.

THE SURFACE OF THE CURB SHALL NOT BE EXCESSIVELY WETTED PRIOR TO OR DURING FINISHING. THE CONTRACTOR SHALL DISCUSS WITH THE VILLAGE HIS FINISHING METHODS PRIOR TO CONSTRUCTION.

EXPANSION JOINTS SHALL BE A DISTANCE OF NOT LESS THAN EIGHT FEET NOR MORE THAN TWELVE FEET ON EITHER SIDE OF STORM STRUCTURES. EXPANSION JOINTS ARE NOT ALLOWED IN HANDICAP RAMPS.

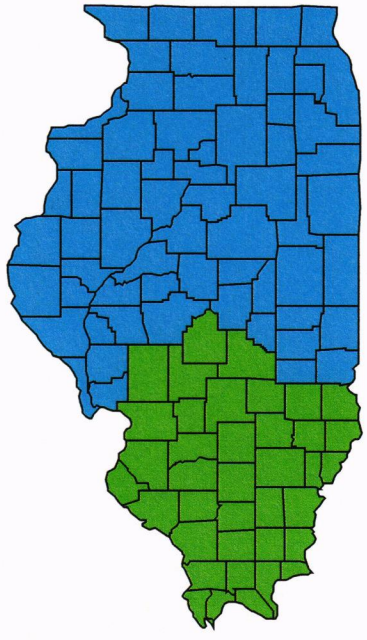
SEE TYPICAL SECTIONS FOR ROADWAY TYPES WHICH REQUIRE GREATER THAN A 10" FLAG.

IECC Compliance Guide for Homes in Illinois

Code: 2018 International Energy Conservation Code

Step-by-Step Instructions

1. Using the climate zone map to the right, match the jurisdiction to the appropriate IECC climate zone. Use the simplified table of IECC building envelope requirements (below) to determine the basic prescriptive requirements for the thermal envelope associated with the jurisdiction.
2. Use the "Outline of 2018 IECC Requirements" printed on the back of this sheet as a reference or a categorized index to the IECC requirements. Construct the building according to the requirements of the IECC and other applicable code requirements.



The 2018 International Energy Conservation Code

The 2018 IECC was developed by the International Code Council (ICC) and is currently available to states for adoption. The IECC is the national model standard for energy-efficient residential construction recognized by federal law. Users of this guide are strongly recommended to obtain a copy of the IECC and refer to it for any questions and further details on compliance. To obtain a copy of the 2018 IECC, contact the ICC or visit www.iccsafe.org. IECC compliance training is also available from many sources.

Limitations

This guide is an energy code compliance aid for Illinois based upon the simple prescriptive option of the 2018 IECC. It does not provide a guarantee for meeting the IECC. This guide is not designed to reflect the actual energy code, with amendments, if any, adopted in Illinois and does not, therefore, provide a guarantee for meeting the state energy code. For details on the energy code adopted by Illinois, including how it may differ from the IECC, please contact your local building code official. Additional copies of this guide are available on www.reca-codes.com.

CLIMATE ZONE 5				
Adams	De Witt	Jo Daviess	McDonough	Sangamon
Boone	Douglas	Kane	McHenry	Schuyler
Brown	DuPage	Kankakee	McLean	Scott
Bureau	Edgar	Kendall	Menard	Stark
Calhoun	Ford	Knox	Mercer	Stephenson
Carroll	Fulton	La Salle	Morgan	Tazewell
Cass	Greene	Lake	Moultrie	Vermilion
Champaign	Grundy	Lee	Ogle	Warren
Clark	Hancock	Livingston	Peoria	Whiteside
Coles	Henderson	Logan	Piatt	Will
Cook	Henry	Macon	Pike	Winnebago
Cumberland	Iroquois	Marshall	Putnam	Woodford
DeKalb	Jersey	Mason	Rock Island	

CLIMATE ZONE 4				
Alexander	Fayette	Johnson	Perry	Union
Bond	Franklin	Lawrence	Pope	Wabash
Christian	Gallatin	Macoupin	Pulaski	Washington
Clay	Hamilton	Madison	Randolph	Wayne
Clinton	Hardin	Marion	Richland	White
Crawford	Jackson	Massac	Saline	Williamson
Edwards	Jasper	Monroe	Shelby	
Effingham	Jefferson	Montgomery	St. Clair	

	Windows			Insulation				Foundation		
	Fenestration U-Factor	Skylight U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value and Depth	Crawl Space Wall R-Value
Zone 5	0.30	0.55	NR	49	20 or 13 + 5	13/17	30	15/19	10, 2 ft	15/19
Zone 4	0.32	0.55	0.40	49	20 or 13 + 5	8/13	19	10/13	10, 2 ft	10/13

NR indicates No Requirement

Outline of 2018 IECC Requirements for Illinois Homes

The simplified table of building envelope requirements (on the previous page) applies to new residential buildings, as defined in the IECC, with wood framing and/or mass walls. For steel-framed buildings, the same window requirements apply; however, refer to IECC section R402.2.6 for specific insulation R-value requirements. The table also applies to all additions, alterations and replacement windows. The table is based upon the thermal envelope requirements in the 2018 IECC's prescriptive compliance option for the appropriate climate zones (Table R402.1.2) and does not reflect any state-specific amendments to the IECC.

Fenestration (IECC Sections R303.1.3, R402.3, R402.5)

- Fenestration (including all windows and doors) and Skylight U-factors are maximum acceptable levels. The Glazed Fenestration SHGC maximums apply to all windows, skylights and glazed doors. An area-weighted average of fenestration products is permitted to satisfy these requirements. (See IECC section R402.3.)
- Window, door and skylight U-factors and SHGCs must be determined by an accredited, independent laboratory, and labeled and certified by the manufacturer, in accordance with a National Fenestration Rating Council (NFRC) rating. Products without an NFRC label must use the default values in IECC section R303.1.3. See www.nfrc.org for more details on the NFRC rating system.
- Windows, skylights, and sliding glass doors must also be labeled in a manner to show that they meet the IECC's air infiltration requirements.
- Up to 15 square feet of glazed fenestration is permitted to be exempt from the U-factor and SHGC requirements. One side-hinged opaque door assembly up to 24 square feet is exempted from the Fenestration U-factor requirement. Special exceptions may apply for Fenestration U-factor requirements in thermally isolated sunrooms. (See IECC section R402.3.5.)

Insulation (IECC Sections R303.1.4 and R402.2)

- Insulation R-values are minimum acceptable levels and must be determined according to Federal Trade Commission rule.
- R-values for walls represent the sum of cavity insulation plus insulated sheathing, if any. The second R-value for mass walls applies when more than half the insulation is on the interior of the mass wall.
- The insulation for basement walls must be from the top of the wall down 10 feet below grade or to the basement floor, whichever is less. Basement wall insulation is not required in warm-humid locations as defined in IECC Figure R301.1 and Table R301.3(1). Insulation requirements for crawl space walls are further specified in IECC section R402.2.11.
- Floor insulation must be installed to maintain contact with the underside of the subfloor decking. Refer to the code for details allowing insulation to be installed on the lower side of the ceiling cavity.
- Access doors from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be weatherstripped and insulated to a level equivalent to the insulation on the surrounding surfaces. Vertical access doors are permitted to meet the fenestration requirements in Table R402.1.2.
- Insulation requirements for slab on grade floors are further specified in IECC section R402.2.10. R-5 insulation shall be provided under the full slab area for heated slabs, in addition to slab edge insulation R-values.
- Special Insulation exceptions related to ceilings with or without attic spaces, masonry veneer and thermally isolated sunrooms are set forth in IECC section R402.

Ducts (IECC Section R403.3)

- Ducts must be tested and verified to have total leakage of no more than 4cfm/100 sq. ft. (or 3cfm if air handler is not installed), except where air handler and all ducts are located inside conditioned space. Air handlers and filter boxes must also be properly sealed.
- Supply and return ducts shall be sealed and insulated as follows:

Duct Location	< 3 inches in diameter	≥ 3 inches in diameter
Attic	R-6	R-8
Other portions of the building	R-4.2	R-6
Completely inside conditioned space	Exempt	Exempt

- Special provisions apply to ducts buried within ceiling insulation. (See IECC section R403.3.6.)

Air Sealing (IECC Section R402.4)

- The building envelope is required to be properly sealed and tested, and verified as having an air leakage rate no higher than 3 ACH at 0.2 inch w.g. (50 Pascals) in climate zones 4 and 5. Recessed lighting must also be sealed to limit air leakage.

Documentation (IECC Sections R103, R303.3, R401.3)

- The appropriate construction documents and preventative maintenance information must be provided, along with a permanent certificate listing certain insulation, window and HVAC performance information.

Systems (IECC Section R403)

- HVAC system must be properly sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved methodologies. New or replacement heating and cooling equipment must meet or exceed federal minimum efficiency requirements for geographic location in which it is installed.
- Temperature controls must be installed, including a programmable thermostat where required.
- Mechanical system piping must be insulated to a minimum of R-3. Hot water piping must be insulated to R-3, with certain exceptions.
- Specific requirements apply to circulating hot water systems, mechanical ventilation, snow melt systems, and pools.

Lighting (IECC Sections R202 and R404.1)

- A minimum of 90% of permanently installed fixtures must contain only high-efficacy lamps as defined in the IECC.

TABLE R402.4.1.1
AIR BARRIER and INSULATION INSTALLATION

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
General requirements	A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stair or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.
Windows, skylights and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.	
Rim joists	Rim joists shall include the air barrier.	Rim Joists shall be insulated.
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of the subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.
Crawl Space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided, instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air sealed boxes shall be installed.	
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.	
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.	

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Facts about garage fires:

- Every year, there are 6,600 garage fires in homes that result in an average of:

o 30 deaths.

o 400 injuries.

o $457 million in property loss.

- Of these fires, 93 percent occurred in 1- and 2-family homes.

- Electrical malfunction is the leading cause of garage fires. These fires can start because of shorts in wires, damaged wires, and overloading electrical outlets.

Information about heat alarms:

- Heat alarms (detectors) respond to fire, not smoke. They are another useful part of any home fire safety plan.

- Smoke alarms in garages can sound because of a change in temperature and humidity, as well as dust, fumes and insects. Heat alarms are made to not be affected by these conditions.

- Smoke alarms are not required, or designed for use, in garages. Many heat alarm models can be connected to a home's fire detection system so that if the heat alarm sounds, the smoke alarms will as well.

Tips for buying and installing heat alarms:

- Purchase a heat alarm that is:

o Hard-wired with a battery backup.

o Capable of interconnecting with your home's smoke alarms.

o Rated for temperatures between 175-250 degrees Fahrenheit. Alarms with lower temperature ratings may sound because temperatures in garages rise above 100 degrees Fahrenheit. Alarms with higher temperature ratings may sound too late to warn you of a fire.

- Have your hard-wired heat alarm installed by a qualified electrician.

- Don't install heat alarms near fluorescent lights. Electrical noise and flickering from the lights may affect the alarm's operation.

- Always follow the manufacturer's instructions.

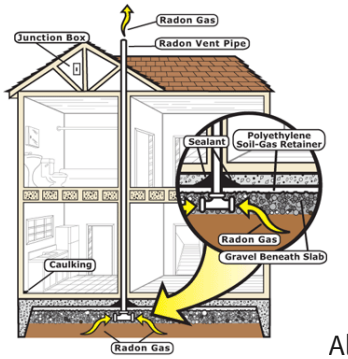
Source: The U.S. Fire Administration https://www.usfa.fema.gov/prevention/outreach/garage_fires.html

The corresponding sections are highlighted below for your reference.

Section 907.2.11 Single and multiple-station smoke alarms Add as an additional paragraph: Heat detectors shall be added in attached garages and shall be interconnected by hardwire to single and multiple-station smoke alarms.

Section 907.2.9 Group R-2 Add as an additional paragraph: Heat detectors shall be added in attached garages and shall be interconnected by hardwire to smoke detectors

Radon-Resistant Construction Techniques



All of the techniques and materials described below are commonly used in home construction. No special skills or materials are required when adding radon-resistant features as a new home is being built.

While the techniques may vary for different house foundations and building site requirements, the five basic features that builders should include to prevent radon from entering a home are:

1. **Gravel:** Use a 4-inch layer of clean, coarse gravel below the “slab,” also called the foundation. This layer of gravel allows the soil gases, which includes radon, that occur naturally in the soil to move freely underneath the house. Builders call this the “air flow layer” or “gas permeable layer” because the loose gravel allows the gases to circulate. **NOTE:** In some regions of the country, gravel may be too expensive or unnecessary. Alternatives are allowed, such as a perforated pipe or a collection mat.

2. **Plastic Sheeting or Vapor Retarder:** Place heavy duty plastic sheeting (6 mil. polyethylene) or a vapor retarder on top of the gravel to prevent the soil gases from entering the house. The sheeting also keeps the concrete from clogging the gravel layer when the slab is poured.

3. **A Vent Pipe:** Run a 3-inch or 4-inch solid PVC Schedule 40 pipe, like the ones commonly used for plumbing, vertically from the gravel layer (stubbed up when the slab is poured) through the house’s conditioned space and roof to safely vent radon and other soil gases outside above the house. (Although serving a different purpose, this vent pipe is similar to the drain waste vent, DWV, installed by the plumber.) This pipe should be labeled "Radon System." Your plumber or a certified radon professional can do this. For more information visit:
    - the National Radon Proficiency Program (NRPP), the National Radon Safety Board (NRSB), or your state radon coordinator for service providers in your area.

4. **Sealing and Caulking:** Seal all openings, cracks, and crevices in the concrete foundation floor (including the slab perimeter crack) and walls with polyurethane caulk to prevent radon and other soil gases from entering the home.

5. **Junction Box:** Install an electrical junction box (outlet) in the attic for use with a vent fan, should, after testing for radon, a more robust system be needed.

A new home buyer may ask the builder about these features, and if not provided, may ask the builder to include them in the new home. If a home is tested after the buyer moves in and an elevated level of radon is discovered, **the owner's cost of fixing the problem can be much more**.

INSULATION CERTIFICATE

ADDRESS: _____ LOT #:_____

ROOF

Material:	Brand Name:
Thickness (inches):	Thermal Resistance (R-value):

CEILING

Batt or Blanket:	Brand Name:
Thickness (inches):	Thermal Resistance (R-Value):
Loose Fill Type:	Brand Name:
Contractor's Minimum Installed Weight/Sq Ft (lbs):	Minimum Thickness (inches):
Manufacturer's Installed Weight/Sq Ft (lbs) to achieve Thermal Resistance (R-Value):	

EXTERIOR WALL

Material:	Brand Name:
Thickness (inches):	Thermal Resistance (R-Value):

RAISED FLOOR

Material:	Brand Name:
Thickness (inches):	Thermal Resistance (R-Value):

SLAB FLOOR

Thickness (inches):	Thermal Resistance (R-Value):
Material:	Brand Name:
Width (inches):	

FOUNDATION WALL

Material:	Brand Name:
Thickness (inches):	Thermal Resistance (R-Value):

I hereby certify that the above insulation was installed in the building at the above location in conformance with the current Building Energy Efficiency Standards for new residential buildings.

GENERAL CONTRACTOR:_____

SIGNATURE:_____ DATE: _____

INSULATION INSTALLER: _____

SIGNATURE:_____ DATE:_____

CONSTRUCTION COMPLETION BOND SHEET
FOR SUBMITTAL AND RELEASE

The intent of the construction completion bond is to allow occupancy for the resident without certain non-life safety issue items completed. These items include grading, trees, and unfinished concrete/asphalt flatwork items. The construction completion bond amount is determined by multiplying 125% by the estimated amount of the job to complete the work. All construction completion work shall be finished within a six (6) month period or the depositor will forfeit the money that was deposited.

Address: _____ Occupancy Date: _____

Subdivision: _____ Lot #: _____

Company: _____ Phone #: _____

The following is a listing of the bonded work. Please save this sheet and complete/return to the Village in order to release these bonds.

ITEM TO BE BONDED	**AMOUNT**	**SUBMITTAL DATE**	**RELEASE DATE**
Grading (final survey required)			
Driveway			
City walks			
Damaged curbs			
Misc.			
TOTAL AMOUNT TO BE RELEASED			

The above listed construction completion work is expected to be completed by: _____

Signature of person submitting bond:_____

Name:_____Date:_____