



1880 Main Street, Centerville, Minnesota 55038  
(651) 429-4750 • Fax (651) 792-7949

**Single Family Detached home submittal Workbook**

Site Address:

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Contractor Name:  
(print)

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Contractor Phone #:

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Contractor E-mail:

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The permit applicant is required to read, fill out and submit all information requested in this workbook. When completed with the workbook, please submit the completed workbook and any additional information required, with 2 sets of plans for review. This workbook also includes information regarding final completion requirements and escrow release. Please keep the copy returned with building permit. It will be useful in

closing out the building permit as well as the escrow release. Any questions, please contact the building department at 651-429-4750.

## Table of Contents

Single Family Home Submittal Requirements.....	Page 3
Permit Application.....	Page 4
Energy Code Compliance Verification Packet .....	Page 5
Energy Code Compliance Form .....	Page 6
2012 IMC table 501.4.1 Make-up of Air Quality .....	Page 7
2012 IMC table 501.4.2 Sizing Table .....	Page 8
2006 IFGC Appendix E, Worksheet E-1 Combustion Air .....	Page 9
2006 IFGC Appendix E, Worksheet E-1 Required Volume .....	Page 10
Engineered Systems Alternative .....	Page 11
Certificate of Survey Requirements (Proposed) .....	Page 12
Minimum Plan Requirements.....	Page 13
New Single Family Plan Submittal Notice .....	Page 14
Certificate of Grading Requirements (As-Built) .....	Page 15 -16
Typical Residential Inspections Required .....	Page 17-18
Erosion Control Site Inspection Form .....	Page 19
Final Building Inspection/Contractor Copy .....	Page 20

## ***SINGLE FAMILY HOME Submittal Requirements Packet-Appendix C***

The following must be submitted with 2 sets of plans that include all information from Appendix A under informational hand-outs tab.

- 1. Signed and completed permit application. (Include Valuation)
- 2. A copy of State Contractors license.
- 3. A signed certificate of survey (3) each to scale 11"X17" See requirements of certificate of survey Appendix B under informational handouts tab. Provide the list to your surveyor, any missing information will delay the review and require a revised submittal.
- 4. Two (2) copies of completed plans drawn to scale. See attachment A Single family plan requirements under informational hand-outs tab. All information on this form is required to be on plan. Additionally any spancrete requires engineering, submit complete detail on loading, footing size, beam sizing, openings, include foundation wall, beam placement (pocket) doweling of planks, etc. This drawing requires a signature from a structural engineer.
- 5. Two completed copies of Minnesota Energy Code compliance verification packet documents. See Pages 5-11.
- 6. Separate permits are required for Mechanical, Plumbing, Water/Sewer and electrical. Electrical permits will be issued through the City.
- 7. Additional submittal may be required as determined by the Building Official.

Any questions, please contact City Hall: (651) 429-3232.

DATE RECEIVED: \_\_\_\_\_  
RECEIVED BY: \_\_\_\_\_  
PERMIT # \_\_\_\_\_



## BUILDING PERMIT APPLICATION

### APPLICANT USE:

PROJECT ADDRESS: \_\_\_\_\_ OR PID # \_\_\_\_\_  
PROPERTY OWNER: \_\_\_\_\_ PHONE # \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ LOT: \_\_\_\_\_ BLOCK: \_\_\_\_\_  
SUBDIVISION: \_\_\_\_\_

GENERAL CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
LICENSE # \_\_\_\_\_ PHONE # \_\_\_\_\_

PROPOSED USE: (CHECK ONE) DWELLING  PRIVATE GARAGE  DECK  HOME ADDITION   
FINISH BASEMENT  THREE SEASON PORCH  SIDING  ROOFING  BUSINESS/COMMERCIAL   
OTHER   
DESCRIPTION OF PROJECT: \_\_\_\_\_

USE AND OCCUPANCY: \_\_\_\_\_ TYPE OF CONSTRUCTION: \_\_\_\_\_  
ESTIMATED VALUE: \_\_\_\_\_

THIS PERMIT BECOMES NULL AND VOID IF WORK OR CONSTRUCTION AUTHORIZED IS NOT COMMENCED WITHIN 180 DAYS, OR IF CONSTRUCTION WORK IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AT ANY TIME AFTER WORK HAS COMMENCED. I HEREBY CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. ALL PROVISIONS OF THE LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISION OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

### CITY USE ONLY:

PLANNING: ZONING DISTRICT: \_\_\_\_\_ MINIMUM SETBACKS REQUIRED: FRONT \_\_\_\_\_ SIDE \_\_\_\_\_  
REAR \_\_\_\_\_ ROAD RIGHT OF WAY \_\_\_\_\_ OTHER \_\_\_\_\_

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
SUBJECT TO THE FOLLOWING CONDITIONS: \_\_\_\_\_

BUILDING INSPECTIONS: REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
SUBJECT TO THE FOLLOWING CONDITIONS: \_\_\_\_\_

PUBLIC WORKS: REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
SUBJECT TO THE FOLLOWING CONDITIONS: \_\_\_\_\_

CITY HALL:  
CITY OF CENTERVILLE  
1880 MAIN STREET  
CENTERVILLE, MN 55038  
PHONE: 651-429-3232 FAX: 651-429-8629

PUBLIC WORKS:  
2085 W. CEDAR STREET  
CENTERVILLE, MN 55038  
PHONE: 651-429-4750

(IF YOU HAVE QUESTIONS ON CODE ITEMS, REQUIRE INSPECTIONS OR TO SCHEDULE AN INSPECTION CALL 651-429-4750)

# New Single Family Dwelling Energy Code Compliance Verification Packet.

## Option A

Submit a completed copy of the new residential construction energy code compliance certificate. (Page 6)

A completed copy of 2012 IMC table 501.4.1 (page 7, sizing table page 8)

A completed copy of 2006 IFGC Appendix E, worksheet E-1 (page 9)

## Option B

Verify compliance with table N1102.1/N1102.12 or equiv., (i.e. Rescheck), and (page 11).

A completed copy of 2012 IMC table 501.4.1 (page 7, sizing table page 8)

A completed copy of 2006 IFGC Appendix E, worksheet E-1 (page 9 & reference table page 10).

## Option C

Engineered systems alternative per N1102.1.5 (page 1)

A completed copy of 2012 IMC table 501.4.1 (page 7, sizing table page 8)

A completed copy of 2006 IFGC Appendix E, worksheet E-1. (page 9 & reference table page 10).

The most common option used is option A please note there are 3 required submittals for any option used. This submittal is required before a building permit will be issued.

# New Residential Construction Energy Code Compliance Certificate

Per N1101.8 Building Certificate. A building certificate shall be posted in a permanently visible location inside the building. The certificate shall be completed by the builder and shall list information and values of components listed in Table N1101.8.

Date Certificate Posted
-------------------------

Mailing Address of the Dwelling or Dwelling Unit	City
Contractor Name:	MN License Number
	Contractor Phone
Contractor Signature	



THERMAL ENVELOPE								RADON SYSTEM			
Insulation Location	Total R-Value of all Types of Insulation	Type: Check All That Apply						Passive (No Fan)			
		Non or Not Applicable	Fiberglass, Blown	Fiberglass, Batts	Foam, Closed Cell	Foam Open Cell	Mineral Fiberboard	Rigid, Extruded Polystyrene	Rigid, Isocyanurate	Active (With fan and monometer or other system monitoring device)	
Below Entire Slab								Other Please Describe Here			
Foundation Wall								Circle One: Interior	Exterior	Integral	
Perimeter of Slab on Grade								Circle One: Interior	Exterior	Integral	
Rim Joist (Foundation)								Circle One: Interior	Exterior	Integral	
Rim Joist (1 <sup>st</sup> Floor+)								Circle One: Interior	Exterior	Integral	
Wall											
Ceiling, flat											
Ceiling, vaulted											
Bay Windows or cantilevered areas											
Bonus room over garage											
Describe other insulated areas											

<b>Windows &amp; Doors</b>	<b>Heating or Cooling Ducts Outside Conditioned Spaces</b>
Average U-Factor (excludes skylights and one door) U:	Not applicable, all ducts located in conditioned space
Solar Heat Gain Coefficient (SHGC):	R-value

MECHANICAL SYSTEMS					Make-up Air <i>Select a Type</i>	
<b>Appliances</b>	Heating System	Domestic Water Heater	Cooling System		Not required per mech. code	
<b>Fuel Type</b>					Passive	
<b>Manufacturer</b>					Powered	
<b>Model</b>					Interlocked with exhaust device. Describe:	
<b>Rating or Size</b>	Input in BTUS:	Capacity in Gallons:	Output in Tons:		Other, describe:	
<b>Structure's Calculated</b>	Heat Loss:		Heat Gain:		Location of duct or system:	
<b>Efficiency</b>	AFUE or HSPF%		SEER:		Cfm's:	
			Calculated cooling load:		" round duct OR	
					" metal duct	

Mechanical Ventilation System					Combustion Air <i>Select a Type</i>	
Describe any additional or combined heating or cooling systems if installed: (e.g. two furnaces or air source heat pump with gas back-up furnace):					Not required per mech. code	
<i>Select Type</i>					Passive	
Heat Recover Ventilator (HRV) Capacity in cfm's:	Low:	High:		Other, describe:		
Energy Recover Ventilator (ERV) Capacity in cfm's:	Low:	High:		Location of duct or system:		
Continuous exhausting fan(s) rated capacity in cfm's:				Cfm's		
Location of fan(s), describe:				" round duct OR		
Capacity continuous ventilation rate in cfm's:				" metal duct		
Total ventilation (intermittent + continuous) rate in cfm's:						

**TABLE 501.4.1 PROCEDURE TO DETERMINE MAKEUP AIR QUANTITY FOR EXHAUST APPLIANCES IN DWELLING UNITS**

	ONE OR MULTIPLE POWER VENT OR DIRECT VENT APPLIANCES OR NO COMBUSTION APPLIANCES <sup>A</sup>	ONE OR MULTIPLE FAN-ASSISTED APPLIANCES AND POWER VENT OR DIRECT VENT APPLIANCES <sup>B</sup>	ONE ATMOSPHERICALLY VENTED GAS OR OIL APPLIANCE OR ONE SOLID FUEL APPLIANCE <sup>C</sup>	MULTIPLE APPLIANCES THAT ARE ATMOSPHERICALLY VENTED GAS OR OIL APPLIANCES OR SOLID FUEL APPLIANCES <sup>D</sup>
1. Use the Appropriate Column to Estimate House Infiltration				
a) pressure factor (cfm/sf)	0.15	0.09	0.06	0.03
b) conditioned floor area (sf)	—	—	—	—
(including unfinished basements)				
Estimated House Infiltration (cfm): [1a × 1b]	—	—	—	—
2. Exhaust Capacity				
a) clothes dryer	135	135	135	135
b) 80% of largest exhaust rating (cfm):	—	—	—	—
(not applicable if recirculating system or if powered <i>makeup air</i> is electrically interlocked and matched to exhaust)				
c) 80% of next largest exhaust rating (cfm):	not applicable	—	—	—
(not applicable if recirculating system or if powered <i>makeup air</i> is electrically interlocked and matched to exhaust)				
Total Exhaust Capacity (cfm): [2a+2b+2c]	—	—	—	—
3. Makeup Air Requirement				
a) Total Exhaust Capacity (from above)	—	—	—	—
b) Estimated House Infiltration (from above)	—	—	—	—
Makeup Air Quality (cfm): [3a - 3b]	—	—	—	—
(if value is negative, no makeup air is needed)				
4. For Makeup Air Opening Sizing, refer to Table 501.4.2.				

- A. Use this column if there are other than fan-assisted or atmospherically vented gas or oil *appliances* or if there are no *combustion appliances*.
- B. Use this column if there is one fan-assisted *appliance* per venting system. Other than atmospherically vented *appliances* may also be included.
- C. Use this column if there is one atmospherically vented (other than fan-assisted) gas or oil *appliance* per venting system or one solid fuel *appliance*.
- D. Use this column if there are multiple atmospherically vented gas or oil *appliances* using a common vent or if there are atmospherically vented gas or oil *appliances* and solid fuel *appliances*.

**TABLE 501.4.2 MAKEUP AIR OPENING SIZING TABLE FOR NEW AND EXISTING DWELLING UNITS**

TYPE OF OPENING OR SYSTEM	ONE OR MULTIPLE POWER VENT OR DIRECT VENT APPLIANCES OR NO COMBUSTION APPLIANCES <sup>A</sup>	ONE OR MULTIPLE FAN-ASSISTED APPLIANCES AND POWER VENT OR DIRECT VENT APPLIANCES <sup>B</sup>	ONE ATMOSPHERICALLY VENTED GAS OR OIL APPLIANCE OR ONE SOLID FUEL APPLIANCE <sup>C</sup>	MULTIPLE APPLIANCES THAT ARE ATMOSPHERICALLY VENTED GAS OR OIL APPLIANCES OR SOLID FUEL APPLIANCES <sup>D</sup>	PASSIVE MAKEUP AIR OPENING DUCT DIAMETER <sup>E, F, G</sup>
	(cfm)	(cfm)	(cfm)	(cfm)	(inches)
Passive opening	1-36	1-22	1-15	1-9	3
Passive opening	37-66	23-41	16-28	10-17	4
Passive opening	67-109	42-66	29-46	18-28	5
Passive opening	110-163	67-100	47-69	29-42	6
Passive opening	164-232	101-143	70-99	43-61	7
Passive opening	233-317	144-195	100-135	62-83	8
Passive opening with motorized damper	318-419	196-258	136-179	84-110	9
Passive opening with motorized damper	420-539	259-332	180-230	111-142	10
Passive opening with motorized damper	540-679	333-419	231-290	143-179	11
Powered makeup air <sup>H</sup>	> 679	> 419	> 290	> 179	Not applicable

- A. Use this column if there are other than fan-assisted or atmospherically vented gas or oil *appliances* or if there are no *combustion appliances*.
- B. Use this column if there is one fan-assisted *appliance* per venting system. Other than atmospherically vented *appliances* may also be included.
- C. Use this column if there is one atmospherically vented (other than fan-assisted) gas or oil *appliance* per venting system or one solid fuel *appliance*.
- D. Use this column if there are multiple atmospherically vented gas or oil *appliances* using a common vent or if there are atmospherically vented gas or oil *appliances* and solid fuel *appliances*.
- E. An equivalent length of 100 feet of round smooth metal duct is assumed. Subtract 40 feet for the exterior hood and ten feet for each 90-degree elbow to determine the remaining length of straight duct allowable.
- F. If flexible duct is used, increase the duct diameter by one inch. Flexible duct shall be stretched with minimal sags.
- G. Barometric dampers are prohibited in passive *makeup air* openings when any atmospherically vented *appliance* is installed.
- H. Powered *makeup air* shall be electrically interlocked with the largest exhaust system.



# 1346.6012 IFGC APPENDIX E, WORKSHEET E-1.

IFGC Appendix E, Worksheet E-1	
Residential Combustion Air Calculation Method (for Furnace, Boiler, and/or Water Heater in the Same Space)	
<b>Step 1:</b> Complete vented combustion appliance information:	
Furnace/Boiler: ___ Draft Hood ___ Fan Assisted ___ Direct Vent      Input: ___ Btu/hr (Not fan Assisted)      & Power Vent	
Water Heater: ___ Draft Hood ___ Fan Assisted ___ Direct Vent      Input: ___ Btu/hr ( Not fan Assisted)      & Power Vent	
<b>Step 2:</b> Calculate the volume of the Combustion Appliance Space (CAS) containing combustion appliances. The CAS includes all spaces connected to one another by code compliant openings.      CAS volume: ___ ft <sup>3</sup>	
<b>Step 3:</b> Determine air Changes per Hour (ACH) <sup>1</sup> Default ACH values have been incorporated into Table E-1 for use with Method 4b (KAIR Method). If the year of construction or ACH is not known, use method 4a (Standard Method).	
<b>Step 4:</b> Determine Required Volume for Combustion Air.	
<b>4a. Standard Method</b> Total Btu/hr input of all combustion appliances (DO NOT COUNT DIRECT VENT APPLIANCES) Input: ___ Btu/hr Use Standard Method column in Table E-1 to find Total Required Volume (TRV)      TRV: ___ ft <sup>3</sup> If CAS Volume (from Step 2) <i>is greater than</i> TRV then no outdoor openings are needed. If CAS Volume (from Step 2) <i>is less than</i> TRV then go to <b>STEP 5</b> .	
<b>4b. Known Air Infiltration Rate (KAIR) Method</b> Total Btu/hr input of all fan-assisted and power vent appliances (DO NOT COUNT DIRECT VENT APPLIANCES)      Input: ___ Btu/hr Use Fan-Assisted Appliances column in Table E-1 to find Required Volume Fan Assisted (RVFA)      RVFA: ___ ft <sup>3</sup> Total Btu/hr input of all non-fan-assisted appliances      Input: ___ Btu/hr Use Non-Fan-Assisted Appliances column in Table E-1 to find Required Volume Non-Fan-Assisted (RVNFA)      RVNFA: ___ ft <sup>3</sup> Total Required Volume (TRV) = RVFA + RVNFA      TRV = ___ + ___ = ___ ft <sup>3</sup> If CAS Volume (from Step 2) <i>is greater than</i> TRV then no outdoor openings are needed. If CAS Volume (from Step 2) <i>is less than</i> TRV then go to <b>STEP 5</b> .	
<b>Step 5:</b> Calculate the ratio of available interior volume to the total required volume. Ratio = CAS Volume (from Step 2) <i>divided by</i> TRV (from Step 4a or Step 4b)      Ratio = ___ / ___ = ___	
<b>Step 6:</b> Calculate Reduction Factor (RF). RF = 1 <i>minus</i> Ratio      RF = 1 - ___ = ___	
<b>Step 7:</b> Calculate single outdoor opening as if all combustion air is from outside. Total Btu/hr input of all Combustion Appliances in the same CAS (EXCEPT DIRECT VENT) Input: ___ Btu/hr Combustion Air Opening Area (CAOA): Total Btu/hr <i>divided by</i> 3000 Btu/hr per in <sup>2</sup> CAO A = ___ /3000 Btu/hr per in <sup>2</sup> = ___ in <sup>2</sup>	
<b>Step 8:</b> Calculate Minimum CAO A. Minimum CAO A = CAO A <i>multiplied by</i> RF      Minimum CAO A = ___ x ___ = ___ in <sup>2</sup>	
<b>Step 9:</b> Calculate Combustion Air Opening Diameter (CAOD) CAOD = 1.13 <i>multiplied by the square root of</i> Minimum CAO A      CAOD = 1.13 x √Minimum CAO A = ___ in	

<sup>1</sup>If desired, ACH can be determined using ASHRAE calculation or blower door test. Follow procedures in Section 304.

**1346.6014 IFGC APPENDIX E, TABLE E-1.**

IFGC Appendix E, Table E-1					
Residential Combustion Air Required Volume (Required Interior Volume Based on Input Rating of Appliances)					
Input Rating (Btu/hr)	Standard Method (ft <sup>3</sup> )	Known Air Infiltration Rate (KAIR) Method (ft <sup>3</sup> )			
		Fan Assisted		Non-Fan-Assisted	
		1994 <sup>1</sup> to Present	Pre 1994 <sup>2</sup>	1994 <sup>1</sup> to Present	Pre 1994 <sup>2</sup>
5,000	250	375	188	525	263
10,000	500	750	375	1,050	525
15,000	750	1,125	563	1,575	788
20,000	1,000	1,500	750	2,100	1,050
25,000	1,250	1,875	938	2,625	1,313
30,000	1,500	2,250	1,125	3,150	1,575
35,000	1,750	2,625	1,313	3,675	1,838
40,000	2,000	3,000	1,500	4,200	2,100
45,000	2,250	3,375	1,688	4,725	2,363
50,000	2,500	3,750	1,875	5,250	2,625
55,000	2,750	4,125	2,063	5,775	2,888
60,000	3,000	4,500	2,250	6,300	3,150
65,000	3,250	4,875	2,438	6,825	3,413
70,000	3,500	5,250	2,625	7,350	3,675
75,000	3,750	5,625	2,813	7,875	3,938
80,000	4,000	6,000	3,000	8,400	4,200
85,000	4,250	6,375	3,188	8,925	4,463
90,000	4,500	6,750	3,375	9,450	4,725
95,000	4,750	7,125	3,563	9,975	4,988
100,000	5,000	7,500	3,750	10,500	5,250
105,000	5,250	7,875	3,938	11,025	5,513
110,000	5,500	8,250	4,125	11,550	5,775
115,000	5,750	8,625	4,313	12,075	6,038
120,000	6,000	9,000	4,500	12,600	6,300
125,000	6,250	9,375	4,688	13,125	6,563
130,000	6,500	9,750	4,875	13,650	6,825
135,000	6,750	10,125	5,063	14,175	7,088
140,000	7,000	10,500	5,250	14,700	7,350
145,000	7,250	10,875	5,438	15,225	7,613
150,000	7,500	11,250	5,625	15,750	7,875
155,000	7,750	11,625	5,813	16,275	8,138
160,000	8,000	12,000	6,000	16,800	8,400
165,000	8,250	12,375	6,188	17,325	8,663
170,000	8,500	12,750	6,375	17,850	8,925
175,000	8,750	13,125	6,563	18,375	9,188
180,000	9,000	13,500	6,750	18,900	9,450
185,000	9,250	13,875	6,938	19,425	9,713
190,000	9,500	14,250	7,125	19,950	9,975
195,000	9,750	14,625	7,313	20,475	10,238
200,000	10,000	15,000	7,500	21,000	10,500
205,000	10,250	15,375	7,688	21,525	10,763
210,000	10,500	15,750	7,875	22,050	11,025
215,000	10,750	16,125	8,063	22,575	11,288
220,000	11,000	16,500	8,250	23,100	11,550
225,000	11,250	16,875	8,438	23,625	11,813
230,000	11,500	17,250	8,625	24,150	12,075

<sup>1</sup>The 1994 date refers to dwellings constructed under the 1994 Minnesota Energy Code. The default KAIR used in this section of the table is 0.20 ACH.

<sup>2</sup>This section of the table is to be used for dwellings constructed prior to 1994. The default KAIR used in this section of the table is 0.40 ACH.

# Minimum Fenestration and Thermal Envelope

(Tables N1102.1 and N1102.1.2 edited and combined)

<u>Component</u>	<u>(Code min.)</u>	<u>Design</u>
Fenestration U-Factor	(min. .35)	_____
Skylight U-Factor	(min. .60)	_____
Ceiling R-Value	(min. 38)	_____
	U-Factor .026	_____
Wood Frame Wall R-Value	(min. 19) or (13 + 5)*	_____
	U-Factor .060	_____
Mass Wall R-Value	(min. 15)**	_____
	U-Factor .077	_____
Floor R-Value	(min. 30)***	_____
	U-Factor .033	_____
Foundation/Rim Joist R-Value	(min. 10)	_____
	U-Factor .10	_____
Slab R-Value and Depth	(min. 10- 3.5 ft.)	_____
	(Add R-5 to "edges" of heated slabs)	_____
Crawl Space Wall R-Value	(min. 10)	_____
	U-Factor .10	_____

Footnotes: \* R-13 cavity insulation plus R-5 sheathing. If structural sheathing covers 25% or less of exterior, R-5 sheathing is not required where structural sheathing used. If structural sheathing covers 26% or more of exterior, structural sheathing shall be supplemented by minimum R-2 sheathing.

\*\* If using log construction, minimum 7" diameter.

\*\*\* Or insulation sufficient to fill entire framing cavity to min. R-19

***CERTIFICATE OF PROPOSED SURVEY TO INCLUDE:***

- 1. Proposed 2-foot contours
- 2. Existing 2-foot contours
- 3. House location with setbacks shown from property lines
- 4. All property lines and easements
- 5. Delineated wetlands and tree preservation areas
- 6. Garage floor, low floor and low opening elevations
- 7. House type
- 8. Top of curb elevations
- 9. Driveway location and width
- 10. Proposed retaining walls (Engineering Certification required for walls > 4' in height)
- 11. Emergency Overflow (EOF) elevations
- 12. High Water Level (HWL) elevations for all water bodies
- 13. Public utilities (storm sewer, sanitary sewer, watermain, etc.)
- 14. Well and/or septic system, primary & secondary (if applicable)
- 15. Erosion control (silt fence, rock construction entrance and other necessary controls)
- 16. Total lot area, total proposed impervious surface and percent impervious calculation
- 17. Three (3) 11"X17" – size hard copies to scale
- 18. Any additional information requested by the City Engineer

# Single Family Building Permit Requirements - Appendix A

## Minimum Plan Requirements

### 1. FOUNDATION PLAN

- a) Completely and accurately dimensioned
- b) Footing sizes and locations:
  - 1. Exterior and interior bearing walls
  - 2. Post pad footings
  - 3. Porch and/or deck footings
  - 4. Fireplace footings
- c) foundations over 5 courses of block shall at least have one #4 (1/2") minimum reinforcing rod installed in grouted cores not more than 6 feet on center (show on plan) or alternate reinforcing as designed by a structural engineer.
- d) Brick ledge and stepped wall locations
- e) Door and window locations and sizes
- f) Interior wall construction materials
- g) Identify cantilevers and method of constructions
- h) Identify plate material
- i) Size of all beams and headers
- j) Crawl space location, access size, wall insulation, ventilation
- k) Floor joist size, spacing and direction
- l) Identify room use by name
- m) Identify unexcavated areas
- n) Location of: 1. furnace 4. smoke detector(s)  
2. Water heater 5. Floor drain(s)  
3. Sump pump 6. Bathroom fixtures
- o) Location and size of stairs, direction of travel
- p) Foundation design:
  - 1. Block foundations – over 5 courses of block require at least on #4 rebar at 6'-0" on center or alternate reinforcing (see item C above)
  - 2. Poured foundations – identify wall thickness; reinforcement size and location
  - 3. Wood foundations – requires suppliers' specification information handout

### 2. FLOOR PLAN(S)

- a) Braced wall plan w/ calculation, w/ location and spacing of braced wall panels used (see example on pg. 21). Which method is being used.
- b) Completely and accurately dimensioned
- c) Door and window location and sizes
- d) Brick facing location
- e) Identify cantilevers and method of construction
- f) Size all beams and headers
- g) Floor joist size, spacing and direction
- h) Identify room use by name
- i) Location and size of stairs, direction of travel
- j) Deck and/or porch construction:
- k) Floor joist size and spacing
- l) Beam and header sizes
- m) rafter/truss size and spacing

- n) Attic access size and location
- o) Location of fireplace, type of fireplace, hearth size
- p) rafter/truss size and spacing
- q) Handrail and/or guardrail – height and spacing of spindles or rails
- r) Location of furnace flue
- s) Smoke detector(s) location
- t) Location of plumbing fixtures and exhaust fans
- u) Identify garage firewall construction and fire door

### 3. CROSS SECTION(S)

(Provide necessary cross sections which shall be sufficiently detailed to indicate the location, nature and extent of the work proposed)

- a) Footing size – exterior and interior bearing walls
- b) Drain tile location
- c) Foundation type, size, number of courses of block, reinforcing
- d) Anchor bolt size and spacing's
- e) Identify plate material
- f) Identify floor joist size and spacing
- g) Identify flooring materials
- h) Label foundation insulation
- i) Basement floor thickness
- j) Stairway – rise, run and headroom
- k) Exterior wall construction:
  - 1. Siding 5. Vapor barrier
  - 2. Sheathing (type, thickness) 6. Interior finish
  - 3. Stud size and spacing 7. Sill plate material type
  - 4. Insulation
- l) Ceiling height
- m) Roof construction:
  - 1. rafter/truss size and spacing 5. Ceiling finish
  - 2. Roof sheathing 6. Ceiling vapor barrier
  - 3. Attic insulation 7. Ice build-up protection
  - 4. Roof ventilation 8. Soffit/fascia material
- n) Soffit ventilation
- o) Wind wash barrier

### 4. EXTERIOR ELEVATIONS

- a) Roof pitch
  - b) Roof ventilation
  - c) Roof overhang dimension
  - d) Siding material (exterior finish materials)
  - e) Location of doors and windows
  - f) Location of decks and/or porches
  - g) Location and height of chimney
  - h) Location of chimney saddle
  - i) Location of house numbers, 3" minimum, contrasting color and reflective material
  - j) Driveway must be a hard surface (concrete, asphalt, and paver
- Complete and accurate information provided on plans submitted will expedite the plan review Process. Additional information may be required as determined by the Building Inspector.

## ***New Single Family Plan Submittal notice:***

Address: \_\_\_\_\_ Date \_\_\_\_\_

By signing below, I attest that I have read the single family home requirements and the minimum single family home submittal requirements are included with the permit submittal. October 1<sup>st</sup> through May 1<sup>st</sup>, Certificate of Occupancy will only be issued during the winter months when temperatures and weather make it impossible to finish items that are not determined to make the home unlivable per the Minnesota State Building Code. In winter builds, full completion is required by July 1st, including final approved escrow inspection. Non winter builds require full completion with the exception of sod or seed which must be established within 60 days of occupancy. Additionally, the escrow release inspection and approval must also be completed within this time period. In either case, the City may require additional escrow for remaining work.

**Erosion control and sediment control are required to be maintained by the permit applicant throughout the construction process. Typically, sites are required to be inspected by the contractor every 7 days or with-in 24 hours of a half inch rainfall. Any non-compliant erosion control measures are required to be repaired within 24 hours.**

Signed \_\_\_\_\_ Date \_\_\_\_\_  
(Home Builder Representative or Permit Applicant)



## ***CERTIFICATE OF GRADING***

I am a duly registered land surveyor, under the laws of the State of Minnesota. I hereby certify that an inspection of this property was conducted by myself or under my direct

Site Address \_\_\_\_\_

Date of Inspection \_\_\_\_\_

supervision and the following items are in conformance with the approved certificate of survey. If there are any exceptions, they should be approved by the Engineering Department prior to the submittal of this certificate.

1. An as-built survey is included as part of this certification.
2. Spot elevations as shown on the certificate of survey are within two-tenths of a foot (+/- 0.2 feet).
3. Lot grades and drainage patterns generally conform to those shown on the as-built grading plan.
4. The elevations of the building and the foundation type are in general accordance with the city approved grading plan.
5. Iron monuments are in place in each lot corner.

Signed \_\_\_\_\_

Firm Name \_\_\_\_\_

Registration Number \_\_\_\_\_

Date \_\_\_\_\_

Approved grading plans should be obtained from the property owner or developer. General questions about certification should be addressed to the Building Inspection Department at 651-429-4750. (Submit this form with page 13).

***CERTIFICATE OF GRADING (“AS-BUILT”) TO INCLUDE:***

Upon completion of final lot grading, the permittee shall submit to the City Centerville, certification that the final lot grading is in compliance with the approved Certificate of Survey as part of the Building Permit). A registered Minnesota Land Surveyor shall sign the certification.

- 1. As-built elevations at lot corners and building corners
- 2. As-built elevations on the side yard swales and high points
- 3. As-built garage floor, low floor, and low opening elevations
- 4. As-built retaining walls (top and bottom of wall elevations at maximum height)
- 5. High Water Level (HWL) elevations and 100 year contour for all water bodies
- 6. As-Built Emergency Overflow (EOF) elevations (if applicable)
- 7. Top of curb elevations
- 8. Verification that all property corners (iron monuments) are in place as of this date
- 9. As-built house location with zoning setbacks shown from property line
- 10. All property lines, easements and setback buffer lines from HWL's, wetlands and water bodies
- 11. Delineated wetlands and tree preservation areas
- 12. As-built house type
- 13. As-built driveway location and width
- 14. Public utilities (storm sewer, sanitary sewer, watermain, etc.)
- 15. As-built well and/or septic system location, primary & secondary (if applicable)
- 16. Total lot area, total as-built impervious surface and percent impervious calculation
- 17. As-built 2-foot contours and sufficient spot elevations to justify as-built contours
- 18. Proposed 2-foot contours (as approved on Certificate of Survey as part of the Building Permit)
- 19. Signed Certificate of Grading and three (3) 11"X17" size hard copies of the survey to scale
- 20. Any additional information requested by the City Engineer



## ***APPENDIX M: SINGLE FAMILY DWELLING – REQUIRED INSPECTIONS***

As a builder in the City of Centerville, you are responsible for scheduling all construction inspections and for the completion of each project in accordance with the permit and approved plans. This document outlines the “standard” inspections required by State and/or City Code for a single family dwelling. Other inspections may be required however. Verify all required inspections with the Inspector prior to starting each project.

To schedule all inspections, simply call 651-429-4750 weekdays between 8:00 a.m. and 4:00 p.m. **You must have the permit number and site address ready when calling to schedule the required inspection (s).** All inspections are scheduled for weekdays only. The first inspection available for the day will be 8:00 a.m. and the last opportunity for the day will be 3:30 p.m. All inspections are scheduled on a first come first serve basis.

### **TYPICAL RESIDENTIAL INSPECTIONS REQUIRED BY LAW:**

**1) Erosion Control Inspection:** This inspection must take place prior to the footing inspection. The inspector will verify proper placement and installation of all required erosion control elements as show on the approved site plan.

**2) Footing Inspection:** All forms must be in place with all required rebar. Place no concrete until this inspection has been approved. *A contractor’s representative must be present for inspection. A Concrete Encased Electrode shall be installed, in any separate structure.*

**3) Foundation Wall:** On masonry walls, all anchor bolts, core fills, damp proofing, drainage systems and exterior insulation must be installed. On poured concrete walls there are two wall inspections required. One prior to pouring concrete into the forms and one after the forms have been removed. Do not backfill until all above has been approved.

**4) Electrical Rough-In:** After all boxes are in, wires are pulled and stapled and all pigtailed are spliced and wire-nutted together as required. Do not cover any wiring until approved. Call Dave Kichler 651-485-7802 to schedule all electrical inspections.

**5) Plumbing Rough-In:** Includes all drain, waste and vent piping, water piping and gas piping. Air test on DWV per code. Pressure-test all gas lines at 25# for 12 hours min. Do not cover any plumbing until approved. *Licensed Plumber must be present for inspection.*

**6) HVAC Rough-In:** All upper level ductwork and rough opening must be installed, including all flues and gas piping. Pressure-test all gas lines at 25# for 12 hours min. Do not cover any ductwork, including underground ducts, until inspected/approved.

**7) Fireplace Inspection(s):** Fireplace unit must be set including the flue, flue chase, gas line and fireplace box/chase. All gas lines must be pressure tested at 25# for 12 hours min. Verify required inspections for all masonry fireplaces with the Inspector prior to starting.

**8) Framing Inspection:** After successfully passing all prior inspections, this inspection may be scheduled. Windows/doors must be installed and the roof must be sealed weather-tight. Do not insulate until this inspection has been approved. *A contractor’s representative must be present for this inspection. Approved plans, including the roof truss plans, must be on the site for the inspector.*

**9) Insulation and Vapor Barrier:** All exterior walls and windows and door joints must be insulated, including cantilevered floor areas and rim joists. All exterior wall penetrations, top plate/attic penetrations, window/door joints and openings through floors must be foamed /draft stopped. All exterior wall vapor barriers and ceiling vapor barriers must be installed. Do not cover any insulation/vapor barrier until this inspection has been approved.

**10) Sheetrock Inspection:** Optional. *(Required on all fire rated assemblies. Verify with Inspector. If required; do not tape until approved.)*

**11) Electrical Final Inspection:** After all fixtures have been installed and all electrical work is complete. *A Final Inspection shall be completed, prior to being utilized by the intended user, and the associated space being*

occupied.

Call Dave Kichler 651-462-6829 to schedule all electrical inspections.

**12) Plumbing Final:** After all fixtures have been set, water meter is installed and sealed. Monometer test required per code. *Licensed Plumber must be present for inspection.*

**13) HVAC Final:** Furnace must be balanced and tested prior to inspection. All mechanical equipment must be operational. All valves must be identified per code. Installation instructions must be available to inspector, Manometer test required at final.

**14) Final Grading Inspection:** Prior to the Final Building Inspection/Occupancy, after the property has been final graded in conformance with the approved site plan and driveway is installed, this inspection is required. If graded areas have not been sodded, and/or vegetation has not been established, required erosion control measures must remain in place and will be checked.

**15) Final Building Inspection/Occupancy:** Prior to moving in any furniture and/or occupancy of the structure, after all previously mentioned inspections have been completed and approved, this inspection is required. All life safety items must be complete and address posted, floor coverings are installed in bathrooms and kitchen and all other work is complete. *Contractor's representative must be present. A Certificate of Occupancy will be issued if all is complete and approved.*

**16) Water and Sewer Service Inspection-** Required to be a licensed plumber or pipe layer, a city license and a plumbing permit is required for certified pipe layers. Note licensed plumbers are exempt from city license. Air test are required on all connections.

SITE / ADDRESS:

# 48 Hour Correction Notice

## EROSION AND SEDIMENTATION CONTROL SITE INSPECTION FORM

An erosion and sedimentation control inspection was completed on this construction site/address on the date noted below, and a violation of the City Ordinance, Permit and/or approved Erosion and Sedimentation Control Plan was identified as noted herein:

### SILT FENCE

- Repair and/or re-install silt fence on site.
- Clean sediment deposits that have breached silt fence.
- Silt fence NOT installed to function properly.
- Silt fence required around spoil piles.
- Additional silt fence installation required.

### TREE PROTECTION FENCE

- Repair and/or re-install tree protection on site.
- Additional tree fence installation required.

### ROCK CONSTRUCTION ENTRANCE

- Entrance requires cleaning of silts/soils.
- Unapproved entrance is in use on the site.
- NOT installed per Plan or Standard Detail.

### INLET PROTECTION

- Repair and/or re-install inlet protection measures.
- Replace inlet protection devices with WIMCO Road Drain Inlet, or equal.
- NOT installed per Plan or Standard Detail.

### STREET CLEANING

- Street cleaning required for site and/or adjacent street.

### OTHER VIOLATION / ADDITIONAL COMMENTS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Date of Inspection: \_\_\_\_\_ By: \_\_\_\_\_  
 Re-inspection Fee Received: (\$50.00 Minimum) Yes  No  Date: \_\_\_\_\_  
 Re-inspection By: \_\_\_\_\_ Date Approved: \_\_\_\_\_

**Construction sites found to be in violation must bring the site into compliance & must schedule a re-inspection within 48 hours from the date of this notice. A re-inspection fee will be charged by the City. Failure to correct this violation notice will result in the City ordering corrective action by a City vendor at the Builder's expense**

# Final Building Inspection

Address: \_\_\_\_\_

Contractor: \_\_\_\_\_ Permit# \_\_\_\_\_

Owner: \_\_\_\_\_ Telephone #: \_\_\_\_\_

- |                        |       |                        |       |
|------------------------|-------|------------------------|-------|
| House Numbers          | _____ | Rim Insulation         | _____ |
| Roof Venting           | _____ | Sump Pump Cover/Pipe   | _____ |
| Vent Termination       | _____ | Furnace                | _____ |
| Gutters                | _____ | Water Heater           | _____ |
| Entrance Door          | _____ | Air Exchanger          | _____ |
| Exit Door              | _____ | Combustion Air         | _____ |
| Deck                   | _____ | Venting Clearance      | _____ |
| Deck Ledger            | _____ | Appliance Gas Shut Off | _____ |
| Flashing/Caulk         | _____ | Electrical Final       | _____ |
| Air Conditioner        | _____ | Fireplace              | _____ |
| Window Well            | _____ | Utilities D-W-R        | _____ |
| Backflow Prevention    | _____ | Radiant Floor Heating  | _____ |
| Irrigation System      | _____ | Sprinkler System       | _____ |
| Garage Door Opener     | _____ |                        |       |
| As Built Survey        | _____ |                        |       |
| Occupancy Separation   | _____ |                        |       |
| Set Backs              | _____ |                        |       |
| Insulation Report      | _____ |                        |       |
| Smoke Detectors        | _____ |                        |       |
| CO Detectors           | _____ |                        |       |
| Bedroom Egress         | _____ |                        |       |
| Window Fall Protection | _____ |                        |       |
| Sliding Door Block     | _____ |                        |       |
| Safety Glass           | _____ |                        |       |
| Bathtub Access         | _____ |                        |       |
| Stairway Tread/Rise    | _____ |                        |       |
| Stairway Height        | _____ |                        |       |
| Handrail               | _____ |                        |       |
| Guardrail              | _____ |                        |       |
| Enclosed Stairway      | _____ |                        |       |
| Basement Finish        | _____ |                        |       |

**Escrow Items**

- |                     |       |
|---------------------|-------|
| Driveway            | _____ |
| Grading             | _____ |
| Sod                 | _____ |
| Curb                | _____ |
| Sidewalk            | _____ |
| Trees (2 deciduous) | _____ |
| Water Valve Tie     | _____ |
| Curb Stop           | _____ |
| To Grade            | _____ |
| Operational         | _____ |
| Radio Read          | _____ |

Other: \_\_\_\_\_

Inspector: \_\_\_\_\_ Date/Time: \_\_\_\_\_