



Building Guide

City of Underwood, Iowa
Building and Safety Department

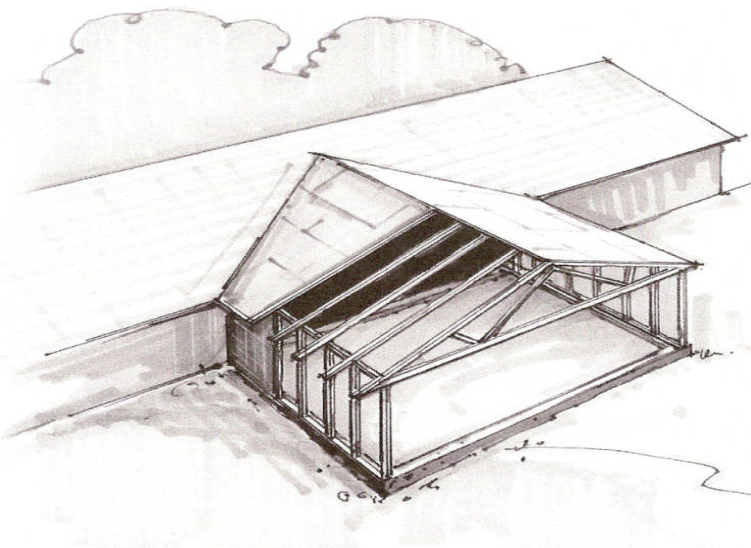
Single Family Residential Addition

How to Use this Guide:

Provide two (2) sets of plans and complete the following: Minimum 11"x17"

- 1) Complete this Building Guide by filling out the blanks on page two (2) and indicating which construction details will be used, and the R value of insulation used.
- 2) Provide 2 Plot Plans showing dimensions of you your project or addition and its relationship to existing buildings or structures on the property. Show all easements and the distance to existing property lines, drawn to scale.
- 3) Provide 2 Floor plans.
Drawn to scale. See example on page 4.
- 4) Fill out a Building Permit Application.

The majority of permit applications are processed with little delay. The submitted documents will help determine if the project is in compliance with building safety codes, zoning ordinances and other applicable laws.

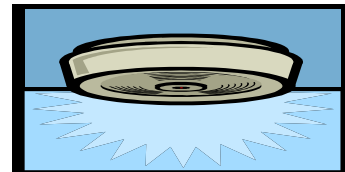


This handout was developed by the City of Underwood, Building & Safety Department as a basic Plan Submittal under the 2009 IRC. To help in questions that may arise in the application process. It is not intended to cover all circumstances or Code related issues as they pertain to individual projects.

IMPORTANT CODE NOTE:

Smoke Alarms:

Smoke alarms are required in all basements. If the finished basement contains a sleeping room, a smoke alarm must be installed on the ceiling or wall in the sleeping room and in the hallway or area immediately outside of the sleeping room. Smoke alarms added to satisfy the above requirements must be hard wired with the battery backup, and interconnected with existing smoke alarms. Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and on each level unless removal of interior wall or ceiling finished would be required. In this case, battery operated devices are acceptable.



Single Family Residential Addition

2x _____ rafters spaced _____ " O.C. or
 Manufactured Trusses spaced _____ " O.C.
 (example: 2 x 12 Rafters Spaced 24" O.C.)

Sheathing _____
 (example: 1/2" exterior plywood)

Minimum 1x _____ ridge board
 (example: 1 x 12)

Roof covering _____
 (example: Class A 3 tab shingles)

Note: For roofs with slopes less than 4:12, follow manufacturer's instructions for low slope application of roofing material.

12
pitch

Underlayment _____
 (example: 1 layer 15# felt)

Building Section

Note: Attic ventilation and access may be required

Provide roof tie downs
 Solid 2x blocking between
 rafters that are 2x12 or greater

Ceiling Insulation _____
 (example: R-38)

Wall Insulation _____
 (example: R-19 Fiberglass Batts)

2x _____ ceiling joists @ _____ O.C.
 (example: 2 x 8 @ 24" O.C.)

Double 2x _____ top plate
 (example: 2 x 6)

Span _____
 (example: 23' 5")

Ceiling height _____
 (example: 8')

Siding _____
 (example: lap or T-111)

Wall sheathing _____
 (example: 1/2" exterior plywood)

2x _____ studs @ _____ O.C.
 (example: 2 x 6 @ 24" O.C.)

Cont. 2x _____ sill plate
 (example: 2 x 4)

2x _____ Joists @ _____ O.C.
 (example: 2x10 @24" O.C.)

Wall width _____ "
 (example: 8")

Footing size _____ " X _____ "
 (example: 8" X 16")

Note: Pre-engineered roof trusses w/truss clips may be used in lieu of roof structure shown.

Diagonal wind bracing or braced wall panels @ corners and each 25' of wall.

Note: Pre-engineered floor systems may be used and should be installed according to the manufacturers installation instructions.

Access required

18" minimum from the interior grade level to the bottom of the floor joists.

Engineered Design: Caissons may be required if your site has swelling soils.

✓ **Check one**

- Foundation: Engineered Design
- Foundation: Detail A
 (see page 3)

Single Family Residential Addition

NOTES

Site Plan _____

1) When drawing your plot plan be sure to show the location of electric, gas, sewer and water service lines. If you don't know where they are, call IOWA ONE CALL 1-800-292-8989. They will come out and locate lines for you. Remember to ask them the cost.

2) Show where the existing electric and gas meters are located on your home. These meters may have to be relocated and it is best to know this before you start construction.

Floor Plan _____

1) **Smoke Alarms.** Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and one on each level unless removal of interior wall or ceiling finishes would be required. In this case, battery operated devices are acceptable.

2) Additions not to enclose bedroom or basement egress windows.

3) **Safety glass is required** at specific locations. When you draw in the location of the new windows on the floor plan, the plan reviewer can identify which ones require safety glass.

4) **Heat is required** in all habitable rooms. Show how the addition will be heated on the plan.

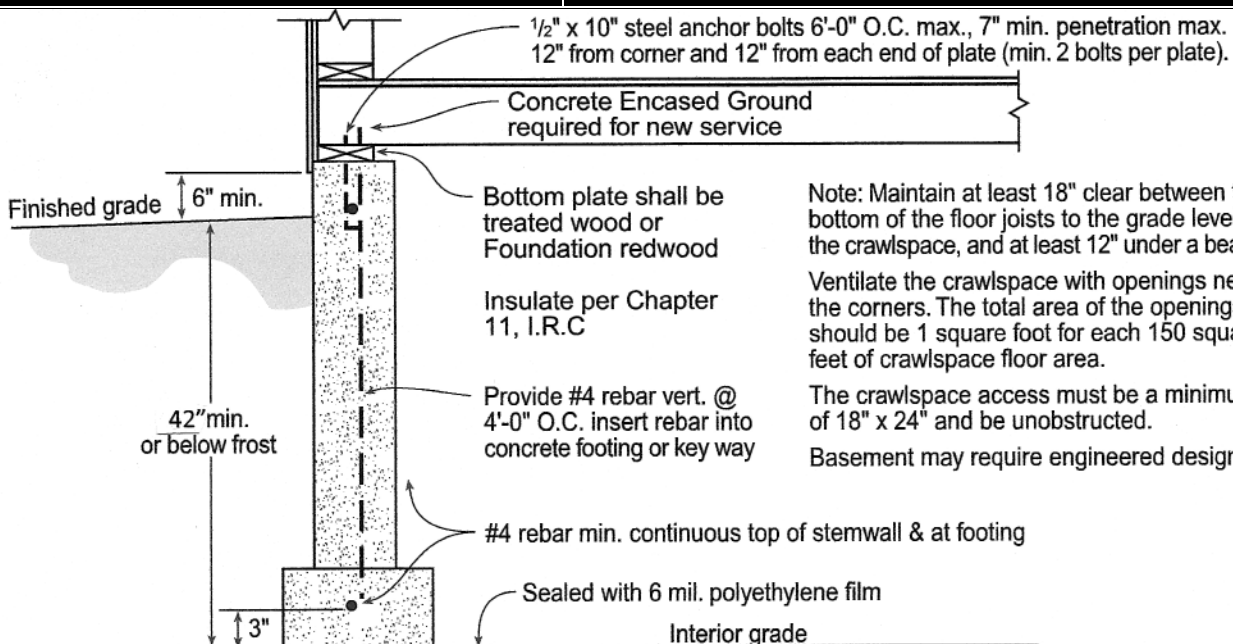
Electrical Code _____

Existing electric service may require an upgrade or relocation. Indicate the size of your electric service (the number on the main breaker) on your plan. This can help the plan reviewer determine if an upgrade is needed before you start construction.

Roof Overframe _____

When constructing a new valley, use a continuous board under the bottom cut of the new rafters to provide a solid nailing surface. The board should be at least 2" thick, nominal and should be at least as wide as the base of the new rafter.

Crawlspace foundation Detail A



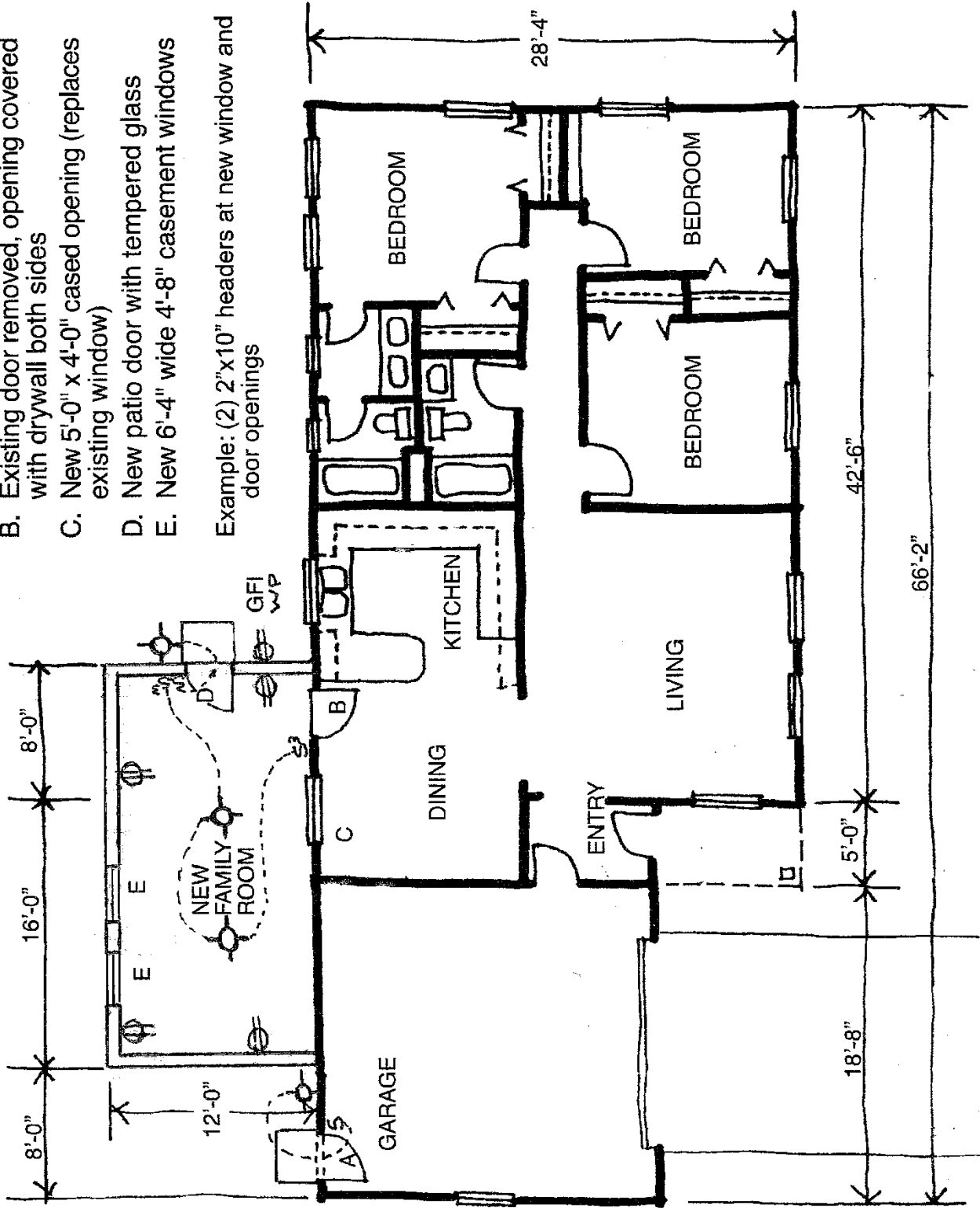
Single Family Residential Addition

Sample Floor Plan

NOTES:

- A. New 3'-0" x 6'-8" door in existing wall
- B. Existing door removed, opening covered with drywall both sides
- C. New 5'-0" x 4'-0" cased opening (replaces existing window)
- D. New patio door with tempered glass
- E. New 6'-4" wide 4'-8" casement windows

Example: (2) 2"x10" headers at new window and door openings



SINGLE FAMILY & TWO-FAMILY DWELLINGS

Dwelling Building Valuation Schedule

(Standard 1 & 2 Family Dwelling Construction Valuation Multipliers)

Building Valuation of	Per Square Feet
Living/Habitable Dwelling Area (include all stories of levels)	\$ 71.50 per Sq. Ft.
Basement - Finished Living/Habitable Dwelling Area	\$ 36.50 per Sq. Ft.
Basement - Unfinished (Non-Habitable Area)	\$ 18.25 per Sq. Ft.
Garage - Attached or Detached	\$ 28.00 per Sq. Ft.
Storage Shed/Building	\$ 28.00 per Sq. Ft.
Carport - Attached or Detached	\$ 12.50 per Sq. Ft.
Porch - Enclosed Living/Habitable Area (Sunroom)	\$ 29.50 per Sq. Ft.
Porch - with Covered Roof	\$ 14.75 per Sq. Ft.
Deck - Elevated Wood Deck not covered	\$ 8.25 per Sq. Ft.

Type of Building Area	Square Footage	Multiplier	Valuation
_____	_____	X _____	\$ _____
_____	_____	X _____	\$ _____
_____	_____	X _____	\$ _____
_____	_____	X _____	\$ _____
_____	_____	X _____	\$ _____
Total Square Footage _____		Permit Valuation \$ _____	

After calculating the square footage with the valuation multiplier above and determining your total permitted valuation. Use the Building Permit Fee Schedule below to determine your Building Permit along with figuring the Plan Review at 25% of the calculated Building Permit cost. **The Plan Review will be a required deposit at the time of your application submittal.** The Building Permit fees will be verified during plan review and collected at the time of permit issuance.

Building Permit	\$ _____
Plan Review Fee	\$ _____
Total Permit Fee	\$ _____

BUILDING PERMIT FEE SCHEDULE

(Title 1.50.105)

TOTAL VALUATION	FEE
\$1 to \$500	\$ 23.50
\$501 to \$2,000	\$ 23.50 for the first \$ 500.00 plus \$ 3.05 for each additional \$ 100.00, or fraction thereof, to and including \$ 2,000.00
\$2,001 to \$25,000	\$ 69.25 for the first \$ 2,000.00 plus \$ 14.00 for each additional \$ 1,000.00, or fraction thereof, to and including \$ 25,000.00
\$25,001 to \$50,000	\$ 391.75 for the first \$ 25,000.00 plus \$ 10.10 for each additional \$ 1,000.00, or fraction thereof, to and including \$ 50,000.00
\$50,001 to \$100,000	\$ 643.75 for the first \$ 50,000.00 plus \$ 7.00 for each additional \$ 1,000.00, or fraction thereof, to and including \$ 100,000.00
\$100,001 to \$500,000	\$ 993.75 for the first \$ 100,000.00 plus \$ 5.60 for each additional \$ 1,000.00, or fraction thereof, to and including \$ 500,000.00
\$500,001 to \$1,000,000	\$ 3,233.75 for the first \$ 500,000.00 plus \$ 4.75 for each additional \$ 1,000.00, or fraction thereof, to and including \$ 1,000,000.00
\$1,000,001 and up	\$ 5,608.75 for the first \$ 1,000,000.00 plus \$ 3.15 for each additional \$ 1,000.00, or fraction thereof...

Example

Type of Building Area	Square Footage	Multiplier	Valuation
Habitable Addition	1,000	X \$ 71.50	\$ 71,500.00
Un-finished Basement	1,000	X \$ 18.25	\$ 18,250.00
1 Car Garage	175	X \$ 28.00	\$ 4,900.00
Covered Patio & Desk (10' X 10')	100	X \$ 8.25	\$ 825.00
Total Square Footage	2,275	Permit Valuation \$ 95,475.00	

Proposed Total Valuation of \$ 95,475.00

For the first \$ 50,000 = \$643.75, plus \$ 7.00 for each additional 1,000 of fraction thereof...

[(\$ 95,475 - \$50,000 = \$ 45,475 X \$ 7.00) = \$ 318.50 + \$ 643.75 = \$ 962.25]

1,000

Building Permit Fee	\$ 962.25
Plan Review Fee	\$ 240.50 [25%(\$962.25x.25)]
TOTAL PERMIT FEE	\$ 1,202.75



**ONE & TWO FAMILY DWELLING
BUILDING PERMIT APPLICATION**

BUILDING & SAFETY DEPARTMENT
INSPECTION LINE 712-256-6493
City Hall 712-566-2373
Fax 712-566-2083
P.O. Box 40/218 Second Street
Underwood, IA 51576

	Receipt Number	Total Permit Amount	Permit Number
JOB SITE ADDRESS		PARCEL NUMBER	
PROPERTY OWNER		PHONE NUMBER	
PROPERTY OWNERS ADDRESS			
CONTRACTOR		PHONE NUMBER	
CONTRACTOR MAILING ADDRESS			

Building Type/Use: Single Family Two-Family (Duplex) Other _____
Class of Work: New Structure Addition

CONSTRUCTION INFORMATION

PROPOSED CONSTRUCTION DESCRIPTION

ESTIMATED CONSTRUCTION VALUATION \$	PROPOSED BUILDING AREA (SQUARE FOOTAGE)
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FLOOD PLAIN DATA	Rate Map # 19155C0-	Flood Zone	<input type="checkbox"/> .2% <input type="checkbox"/> AH	Floodplain?	Floodway?
		<input type="checkbox"/> A <input type="checkbox"/> AO		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
		<input type="checkbox"/> AE <input type="checkbox"/> X		<input type="checkbox"/> No	<input type="checkbox"/> No

PERMIT FEES		AMOUNT
For One & Two Family dwellings (Residential): After calculating the square footage with the valuation multiplier and determining your total permitted valuation. Use the Building Permit Fee Schedule and determine your Building Permit Fee. This permit fee will be verified during plan review and collected at the time of permit issuance. (See Next Page)	Building Permit Fee	\$
Figuring the Plan Review Fee at 25% of the calculated Building Permit Fee cost. The Plan Review Fee will be a required deposit at the time of your permit application submittal. (See Next Page)	Plan Review Fee (submittal deposit)	\$
	Total Amount	\$

I will save, indemnify, and keep harmless the City of Underwood, Iowa its officers, employees, and agents against all liabilities, judgments cost, and expenses which may accrue against them in consequence of the granting of this permit, inspections, or use of any on -site or off -site improvements placed by virtue hereof, and will in all things strictly comply with all applicable rules, ordinance, and laws. Signature constitutes an attestation by the applicant that application complies with all covenants, conditions, and restrictions.

APPLICANTS SIGNATURE _____ **DATE** _____

Issued By _____ Date _____