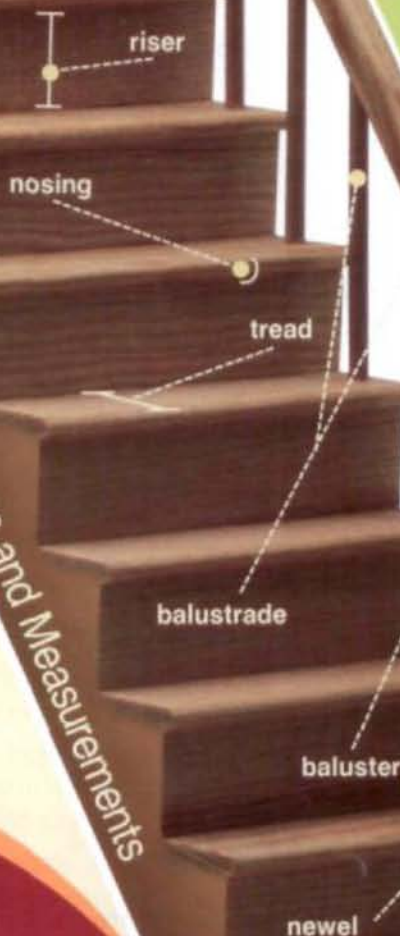


When constructing a **flight of stairs**, the first step is to install the **stringer** that will support the staircase. Different kinds of stringers can be used for stairs made of wood, steel, or concrete. Next, determine the correct number of **risers** and **treads**. Divide the vertical distance from one floor to the next by the desired **riser height**. The result will be the number of risers needed. The number of treads is determined by dividing the horizontal distance by the desired **tread depth**. A **nosing** can extend each tread to provide for a secure foothold. The **going** of each step should be easily covered in a single step. Also, remember that **landings** must be placed to divide a long staircase into smaller sections.

A handrail is an important safety feature of every staircase. You may need to install a special **balustrade** to a decorative set of stairs. First, install a **newel** at each end to support the balustrade. Then, install the **baluster** columns and place the **banister** rail on top. Last, if there is a floor beneath it, the **spandrel** underneath the staircase can be used for storage or some other function. Otherwise, it can be closed off.

Installing Stairs: Instructions and Measurements



## Get ready!

1 Before you read the passage, talk about these questions.

- 1 What are some parts of a staircase?
- 2 What does a person hold when walking down stairs?

## Reading

2 Read the instructions on installing stairs. Then, choose the correct answers.

- 1 What is the first step to constructing a flight of stairs?
  - A install the stringer
  - B install the balustrade
  - C ensure the tread is safe
  - D divide the vertical distance by the riser height
- 2 How can tread depth be increased?
  - A add a nosing
  - B reduce the going
  - C install larger newels
  - D insert landings
- 3 Which of the following is NOT part of a balustrade?
  - A baluster
  - B spandrel
  - C newel
  - D banister

## Vocabulary

3 Match the words (1-8) with the definitions (A-H).

- |              |              |
|--------------|--------------|
| 1 — stringer | 5 — baluster |
| 2 — going    | 6 — landing  |
| 3 — tread    | 7 — banister |
| 4 — stairs   | 8 — riser    |

- A a short column used as part of a group to support a rail on the side of a staircase
- B the vertical part of a step
- C the distance from the edge of a nosing to the edge of nosing in plan view
- D steps that connect two floors in a building
- E the handrail of a staircase.
- F the structural part of a staircase that supports the risers and treads
- G a platform at the bottom, at the top, or in between sets of stairs
- H the horizontal part of a step



# 12 Masonry



**SUE GABLE**

## Expert Mason

Whether you want a decorative brick wall or a complete brick building, I am the **mason** for you. I have over 20 years of **masonry** experience. My recent work includes:

- leading the installation of the exterior **bearing wall** at the Two Oaks Shopping Center
- designing and installing numerous **curtain walls** in the Fair Meadows housing project
- installing a complex **multiwythe cavity wall** at the Jefferson Government Building

With my experience, I can recommend the right design for your needs. For example, do you need room for drainage but still want a brick wall? A **single wythe veneer** wall with airspace backing is right for you.

I've used every type of **masonry unit**, including brick, concrete, and limestone. I can make the perfect **mortar** mix for any material to guarantee a strong, long-lived wall. I am also familiar with using **grout** to embed steel reinforcement in a wall.

I would be happy to visit your building site for a free consultation. Please call me at (797) 555-2356 or email [sue@gablemasonry.com](mailto:sue@gablemasonry.com).



## Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- |                  |                  |
|------------------|------------------|
| 1 — cavity wall  | 4 — veneer       |
| 2 — single wythe | 5 — curtain wall |
| 3 — bearing wall | 6 — multiwythe   |

- A a wall with a thickness of one block  
 B a wall that bears a weight down to a foundation structure  
 C a wall with a thickness of two or more blocks  
 D a wall that has one masonry layer backed by an airspace  
 E a wall that is non-structural and only serves to keep out the weather  
 F a wall that has two skins made from brick or concrete separated by a hollow space

## Get ready!

1 Before you read the passage, talk about these questions.

- 1 What material does a mason work with?
- 2 What connects bricks in a brick wall?

## Reading

2 Read the ad for a mason. Then, mark the following statements as true (T) or false (F).

- 1 — The mason recently completed a single wythe veneer wall.
- 2 — The mason mixes her own mortar.
- 3 — Grout is used to embed brick into a wall.

4 Fill in the blanks with the correct words and phrases from the word bank.

## Word Bank

masonry unit   mortar  
 masonry   mason   grout

- 1 Use a special \_\_\_\_\_ to embed the rebar in this wall.
- 2 The construction company is hiring a new \_\_\_\_\_.
- 3 Use standard \_\_\_\_\_ to join the bricks together.
- 4 This concrete \_\_\_\_\_ weighs eight kilograms.
- 5 \_\_\_\_\_ involves the use of many materials other than bricks and cement.