

# Services Guide

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## Masonry and Bricklaying Contractors

*\*NOTE 1: This information is pulled from credible sources. This information is a guide. Any information used from this guide must be re-contextualized (no copying and pasting). Re-contextualize information incorporating SEO and business specifics.*

*\*NOTE 2: For MCP websites, stick to general information and avoid specifics.*

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# 1. MASONRY AND BRICKLAYING OVERVIEW

## 1.1 GENERAL INFORMATION

<https://en.wikipedia.org/wiki/Masonry>

- **Masonry** is the building of structures from individual units, which are often laid in and bound together by mortar; the term *masonry* can also refer to the units themselves.
- The common materials of masonry construction are brick, building stone such as marble, granite, travertine, and limestone, cast stone, concrete block, glass block, and cob.
- Masonry is generally a highly durable form of construction. However, the materials used, the quality of the mortar and workmanship, and the pattern in which the units are assembled can significantly affect the durability of the overall construction.
- A person who constructs masonry is called a **mason** or **bricklayer**.
- Masonry is commonly used for the walls of buildings, retaining walls and buildings. Brick and concrete block are the most common types of masonry in use and may be either weight-bearing or a veneer (a thin layer covering a structure built of another material).
- Concrete blocks, especially those with hollow cores, offer various possibilities in masonry construction. They generally provide great compressive strength, and are best suited to structures with light transverse loading when the cores remain unfilled.
- Filling some or all of the cores with concrete or concrete with steel reinforcement (typically rebar) offers much greater tensile and lateral strength to structures.

### Advantages:

- The use of material such as bricks and stones can increase the thermal mass of a building and can protect the building from fire.
- Most types of masonry typically will not require painting and can provide a structure with reduced life-cycle costs.
- Masonry is non-combustible product.
- Masonry walls are more resistant to projectiles, such as debris from hurricanes or tornadoes.
- Masonry structures built in compression (preferably with lime mortar) can have a useful life of more than 500 years as compared to 30 to 100 for structures of steel or reinforced concrete.
- Bricks are a fire-resistant material.

### Disadvantages:

- Extreme weather, under certain circumstances, can cause degradation of masonry due to expansion and contractions forces associated with freeze-thaw cycles.
- Masonry tends to be heavy and must be built upon a strong foundation, such as reinforced concrete, to avoid settling and cracking.
- Other than concrete, masonry construction does not lend itself well to mechanization, and requires more skilled labor than stick-framing.
- Masonry consists of loose components and has a low tolerance to oscillation as compared to other materials such as reinforced concrete, plastic, wood, or metal.

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### 1.2 SEO

#### Keywords (First Row – BEST, Last Row – LEAST)

○ Paving stones	○ Brick house	○ Retaining wall blocks	○ Brick veneer
○ Brick wall	○ Driveway	○ Patio stones	○ Concrete blocks
○ Masonry	○ Red brick	○ Landscaping	○ Mason
○ Stone driveway	○ Bricklayer	○ Brick repair	○ Retaining wall design

### 1.3 TYPES OF MATERIALS

<http://www.landscapeplanet.com/hardscapes-3-masonry-materials.htm>

<http://www.gsa.gov/portal/content/112578>

<http://www.terreal.us/solutions/terra-cotta-performance/>

#### Types of Masonry Materials:

Type	Description	Benefits
<b>Brick</b>	<ul style="list-style-type: none"><li>○ Brick is the most common type of masonry material, and may be either weight bearing or a veneer.</li><li>○ Brick is made of two or more layers of brick with the units running horizontally called “stretcher” that are bound together with bricks running transverse to the wall called “header” bricks.</li><li>○ Each row of bricks is called a “course.”</li><li>○ Bricks are made from clay, shale, soft slate, calcium silicate, concrete, or shaped from quarried stone.</li><li>○ Clay is the most common material of bricks that are formed in one of the three processes - soft mud, dry press, or wire cut.</li></ul>	<ul style="list-style-type: none"><li>○ Brick is usually locally made (for major cities) and environmentally sustainable.</li><li>○ It does not expel any toxic substances or volatile organic compounds into the air.</li></ul>
<b>Natural Stone</b>	<ul style="list-style-type: none"><li>○ Natural stones are granite, marble, limestone, sandstone, slate, and</li></ul>	<ul style="list-style-type: none"><li>○ Natural Stone is the most recommended masonry material</li></ul>

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	travertine.	<p>because of its durability and endurance to weather.</p> <ul style="list-style-type: none"> <li>○ Natural stone is a one-time investment that will last a lifetime.</li> </ul>
<b>Concrete Block</b>	<ul style="list-style-type: none"> <li>○ Blocks of cinder concrete, ordinary concrete or hollow tile are known as Concrete Masonry Units.</li> <li>○ Surface-bonding cement, which contains synthetic fibers for reinforcement, is used in this application to give extra strength to a block wall.</li> <li>○ Compared to smaller clay-based brick, concrete block wall can be reinforced by filling the block voids with concrete with or without steel rebar.</li> <li>○ Some concrete blocks employ a split face and are colored. This is a result of a two blocks being manufactured as one unit and later split into two.</li> <li>○ This gives the blocks a rough face that replicates the appearance of natural, quarried stone, such as brown stone.</li> </ul>	<ul style="list-style-type: none"> <li>○ Concrete blocks are larger than ordinary bricks and much faster to lay for a wall of a given size.</li> <li>○ This masonry material has low water absorption than bricks and is often used as the structural core for veneered brick masonry or is used alone for the walls of factories, garages, and other industrial buildings where appearance is desirable.</li> </ul>
<b>Tile</b>	<ul style="list-style-type: none"> <li>○ Tiles are a piece of hard wearing material such as ceramic, stone, metal or even glass that are manufactured and are generally used for covering roofs, floors, and walls or other objects such as tabletops.</li> <li>○ A masonry material, tiles are often used to form and floor covering and ranges from simple square tiles to complex mosaics.</li> <li>○ It is made from ceramic with a hard glaze finish.</li> </ul>	<ul style="list-style-type: none"> <li>○ Durable and stand up to weathering.</li> </ul>
<b>Terra Cotta</b>	<ul style="list-style-type: none"> <li>○ Fired clay.</li> <li>○ Typically hollow, formed by pressing clay into a mold, by hollowing out</li> </ul>	<ul style="list-style-type: none"> <li>○ Very durable.</li> <li>○ There are buildings that have over 100 year old clay roof tiles</li> </ul>

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	<p>portions of a solid, or by extruding it.</p> <ul style="list-style-type: none"> <li>○ Usually low-fired.</li> <li>○ Typically a reddish, unglazed ceramic material. It may also be a hard-fired glazed or unglazed ceramic material.</li> <li>○ Durable (dependent upon the degree of firing).</li> <li>○ Fireproof.</li> <li>○ Strong.</li> <li>○ Can be molded into virtually any shape.</li> <li>○ Available in a variety of designs, colors and finishes.</li> </ul>	<p>that still look and perform like new.</p>
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**1.4 BENEFITS OF MASONRY**

<http://www.mca-m.com/benefits.html>

**The Benefits of Building with Masonry:**

Benefit	Description
<b>Offers a very large range of colors, textures, styles, and finishes.</b>	<ul style="list-style-type: none"> <li>○ These range from rough stone to brick to structural glazed tile to architectural block...each with its own unique appeal.</li> <li>○ No other system can offer so much variety and compatibility.</li> <li>○ Masonry is extremely cost effective. Not only are there cost advantages during the initial construction phase, but masonry also helps keep costs down over the life of a building by providing a low maintenance structure.</li> <li>○ The exterior is easy and inexpensive to maintain; and since masonry is much more durable than drywall, interior walls are practically maintenance free...no holes in the walls.</li> <li>○ Doors will open and close properly over the life of the building due to the uniform nature of the construction.</li> <li>○ Masonry buildings offer additional cost savings with lower fire insurance costs, and lower energy costs. This is possible because masonry is a long-term performance material.</li> </ul>
<b>Energy Efficient</b>	<ul style="list-style-type: none"> <li>○ Masonry outperforms other systems in dynamic heating and cooling conditions more effectively than lightweight backup and wall systems.</li> <li>○ Masonry's mass delivers vital energy economy by reducing heat loss in</li> </ul>

	<p>cold weather and heat gain in warm weather.</p> <ul style="list-style-type: none"><li>○ Inherent thermal storage qualities assist in reducing heating and cooling loads thus providing long-term energy savings.</li></ul>
<b>Noise Barrier</b>	<ul style="list-style-type: none"><li>○ Masonry walls create a quieter environment in contrast to lightweight systems with their lack of density and their tendency to have “acoustical holes.”</li><li>○ The mass and monolithic properties of masonry make the system far superior in its ability to reduce sound transmission.</li><li>○ In addition, special masonry units, designed to absorb sound, are available for high noise areas.</li></ul>
<b>Fire Barrier</b>	<ul style="list-style-type: none"><li>○ Masonry walls provide a permanent structural fire barrier that is non-combustible and will not fail due to lack of maintenance.</li><li>○ Masonry walls are tested under load bearing conditions up to 2000 deg Fahrenheit and then blasted with a fire hose.</li><li>○ No other fire barrier is tested in this fashion.</li><li>○ This feature makes masonry an ideal choice for schools, hospitals, nursing homes, college dormitories and housing for the elderly.</li></ul>
<b>“Green” Material</b>	<ul style="list-style-type: none"><li>○ The manufacturing process of masonry materials is a low energy consumption process compared to the manufacturing process of many other materials.</li></ul>

## 2. MASONRY SERVICES

### 2.1 LANDSCAPING & HARDSCAPING

<http://dunbarmasonry.ca/#metis-ID-services>

<http://www.flintstonesmasonry.com/masonry/stairs-steps-retaining-walls-victoria/>

- We install patios of flagstone, tile, and pavers.
- We also reshape your yard with terraces, stone retaining walls, borders, and planters.
- Finally, by adding elements such as water features and outdoor fireplaces, we can turn your yard into a beautiful extension of your home.
- Our designers can completely change the look and feel of your yard and our masons will build it perfectly.

#### Stone Stairs & Steps:

- One of the most under-appreciated aspects of your home is its entrance. Get this right and your home can go from being “just another boring bungalow” to “that amazing bungalow.”

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- But while most of us will spend hours choosing the perfect door and trim, we'll often treat the stairs and steps as an afterthought. That's one big reason why so many porches and entranceways fail to make a great first impression.
- Stairs and steps bridge outdoor and indoor spaces as well as different areas in your yard.
- For that reason, they should be thought through. One of the best ways to turn a bland stairway into a memorable one is to use stone.
- Stone stairs are also a great way to transition between levels in a sloped yard. And a stone stairway is the ideal complement to your stone driveway, sidewalk or patio

### Retaining Walls:

- Stone retaining walls have been used to shore up sloping properties for eons. But retaining walls can also be used to add elegance and beauty to your back yard or garden.
- Built properly, your stone wall will last for generations and require very little maintenance.
- Too often, shoddy workmanship leads to cracks, leaning, and eventually, collapse of the wall.
- For that reason, it's important to look for masons with experience building retaining walls in various types of landscape conditions.

## 2.2 CHIMNEY & FIREPLACE

<http://dunbarmasonry.ca/chimney-and-fireplaces/>

- Chimneys and fireplaces can be a very important part of any home. They may provide heat, smoke ventilation, and an attractive focal point for a room.
- However, if left unmaintained or damaged they can be extremely dangerous.

### Fireplace or Chimney Cleaning:

- To ensure your fireplace is working properly we recommend a cleaning and inspection every year.
- With use overtime, chimneys build up a substance called creosote on their interior walls. Creosote ignites at temperatures as low as 451 Fahrenheit, about the same ignition rates as ordinary paper.
- Once ignited, the heat can transfer to the wood structure of the house resulting in a fire. Even chimneys that are used less regularly can be at risk.
- Animals such as birds and squirrels often build nests in the flue of a chimney, blocking air flow and providing fuel for a potential fire.
- Your chimney cleaner may recommend an animal screen to prevent this. Chimneys for coal, gas, and oil should also be inspected for maintenance or the installation of a liner to help prevent fires, moisture damage, and the spread of toxic fumes into the home.

### Chimney Repair or Fireplace Repair:

- Creosote buildup is not the only cause for concern in your chimney. Cracks or holes in your firebox or smoke chamber may result in unsafe heat transfer, increasing the risk of a fire.

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- Weakened mortar may result in water damage, smoke damage, or loose brick/stone.
- One of the main causes of chimney leaks and water damage is the chimneys flashings. Flashings are often incorrectly installed, worn out, or missing altogether.
- A damaged crown or shoulder may also lead to water damage.
- Depending on your situation, we may recommend your chimney is repointed (a process of replacing the existing mortar with new mortar), a rebuild of your firebox, shoulder, or crown, the addition of a chimney pot or liner, or the installation of new counter flashings.

### Chimney Rebuilds:

- If your chimney is beyond repair, it likely needs to be reconstructed.
- Once your chimney is removed, our expert chimney rebuilders will inspect the condition of your chimney's foundation and advise you on whether it needs to be replaced as well.
- A damaged foundation is often the cause of a damaged chimney.

## 2.3 DRIVEWAYS, PATIOS, WALKWAYS

<http://www.flintstonesmasonry.com/masonry/driveways-patios-walkways-victoria/>

<http://nypavingandmasonry.com/long-island-driveway-pavers-contractor/>

### Driveways:

- Driveways are subject to heavy usage and are exposed to extreme weather conditions such as precipitation. It needs to be laid to ensure that it can withstand all these elements
- We use unique ways of laying the materials in with many different patterns to give your driveway a unique spectacular look.
- While considering the visual appeal of the driveway, we also keep in mind the performance and strength during designing.
- The curb appeal of your home starts at the curb. That's why your old driveway should be near the top of your home improvement list.
- When it comes time to replace or repair it, don't be afraid to try something new.
- In addition to asphalt, concrete and stamped concrete, a range of new interlocking brick and driveway paver products have come available in the past few years, giving you more options than ever before.

## 2.4 RESTORATION

<http://dunbarmasonry.ca/masonry-restoration/>

- Heritage and historical building restoration can be a difficult and delicate task. It often requires a specialized set of knowledge and skills. We are experts at restoring the structural integrity of old buildings while keeping their heritage look.

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- In many developing areas, historical and heritage buildings are being transformed to have a more modern purpose. These buildings are often converted into stores or condos.
- We have extensive experience in keeping and refurbishing historical brick facades while the rest of the building is demolished and reconstructed. We ensure the proper steps are taken so that these structures can continue to endure the tests of time.