

IMAGINE GREATER WITH WICHMAN



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Stairs, Steps & Staircases

This simple guide is provided to help the homeowner learn and understand the basics of hardscape step construction details.

The decision to install steps requires careful planning and an eye for detail. The slope of the terrain, the path the steps will take when part of a walkway all need to be factored into the design. Typically steps are normally part of a an entrance way to the home, a back yard pathway to the pool or garden, a pathway around the home or a connector for various outdoor entertainment areas. The design of the steps needs to match the rise of the landscape and the homeowner should examine as many different layouts as possible.

Therefore, our advice is --- **“learn about the type of steps you need and want and take your time to make a decision”**. --- We encourage the homeowner to examine as many different layouts and choices as possible. Look through the Wichman social media sites noted on the last page as well as examine “Pins” on [Pinterest](https://www.pinterest.com) and” Ideabooks or Projects” on [Houzz](https://www.houzz.com). Pick up and examine as many of the various landscaping design booklets or browse through the various product design brochures offered by the paver manufacturers as well as offerings made by the landscape supply houses, to get a sense of what is available in the way of product choices. For your convenience, we have listed embedded sites to view at the end of the bulletin.

This technical bulletin addresses the basics of step and stair construction design features and will help the homeowner to plan the best layout that meets their needs and budget.

Stairs, Steps and Staircases:

The first consideration is the placement of the steps and the overall layout. Next look at the length and direction it will take as well as the straight or irregular path that it might use. Add in other additions to define form and influence functionality such as: [Lighting and Landscaping & Cheek Walls](#). All of these factors will impact the cost of the design and hence your budget.

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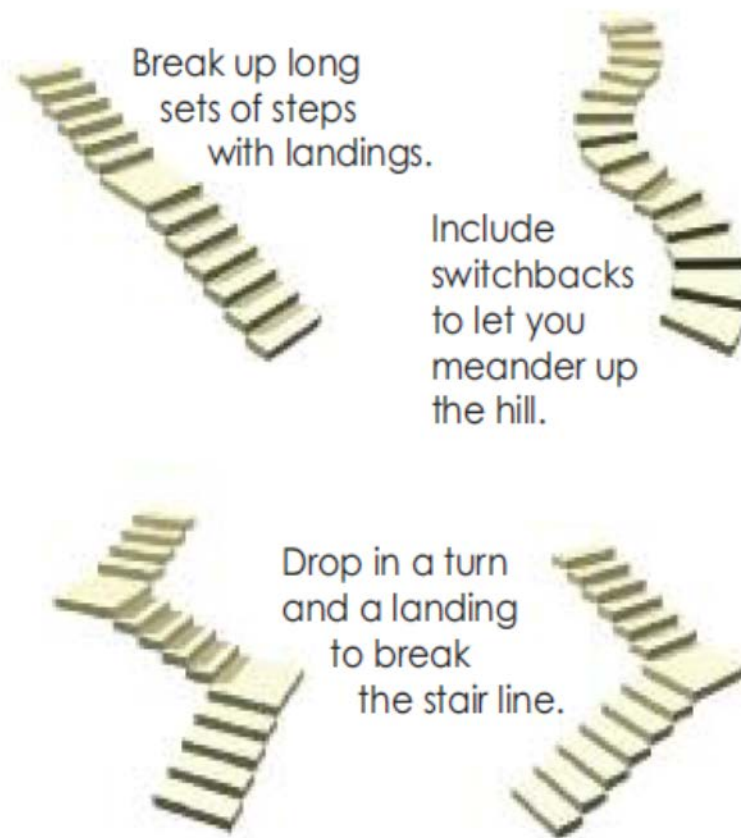
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Here are some various ideas that can be considered for stair case designs:



When considering a staircase, not only are hardscape pavers an option but Sandstone treads and slabs as well as Limestone treads set in concrete suitable for the application. Furthermore, many manufacturers have duplicated large stone shapes with precast concrete that can serve as beautiful treads to construct staircases. Check with Wichman Landscape Construction and your local landscaping supply house to see what they have to offer. In this case below, the basic design for a set of steps would start first with establishing a run and rise of the steps:

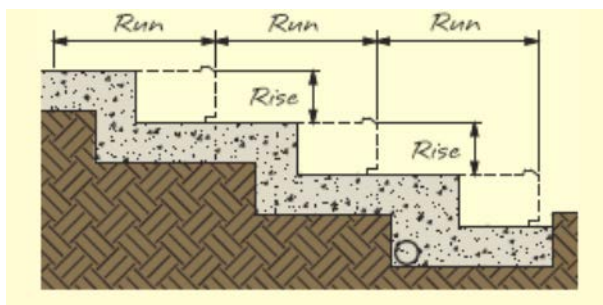
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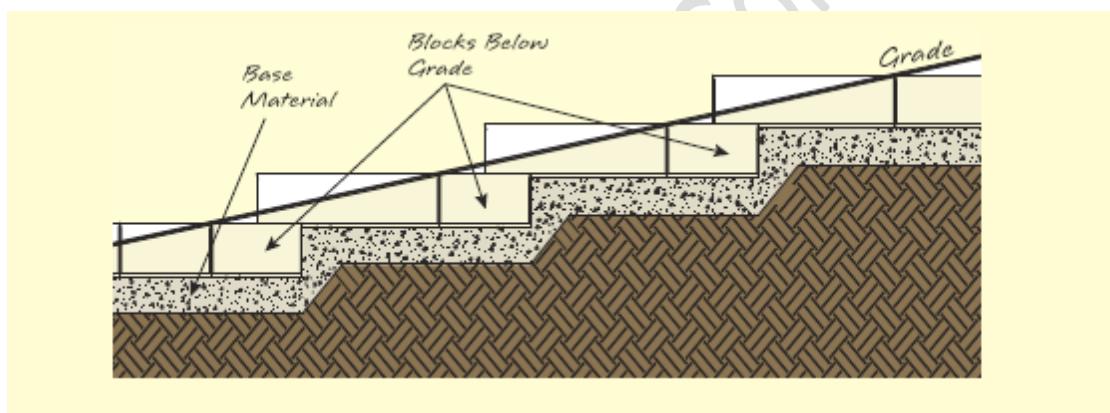
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Then the choice of the paver or stone size will determine the run depth of the step.



Wichman Landscape Construction can advise best on the style of the hardscape portion of the steps and we will work along with your electrical contractor to run the necessary underground conduit to install the lighting for 120 volt or low voltage runs.

When first starting to scope out the project, consider these issues:

- **Property Lot lines.** Your municipality will have copies of your lot survey on file. The survey will not only identify property lines but may provide a scaled template of your lot to help in the planning.

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- **Utilities.** Buried utility lines such water, cable, electric and gas may prevent you from constructing portions of the project. Mark the lines, if you know where they are, or call your local utility to have them mark the lines.
- **Neighbors.** Depending on the project scope and the proximity to neighboring properties, let your neighbors know about your project before you begin.
- **Soil.** One of the most important aspects of construction will be the type of soil that the project will lay on top of. Soil conditions will impact wall designs and can impact the sub-structure under the walkway. Clay soils can cause a problem because they tend to hold moisture and need to drain to prevent freeze/ thaw problems. A good rule of thumb is to pick up the soil and using your hand squeeze it to form a ball. However, never use organic soil; it will not hold the pressure. For Retaining wall design technical issues

Planning Your Step or Staircase:

Use the embedded Wichman worksheet [Grid technical sheet.pdf](#) to lay out a plot plan.

Please fill in the blanks to develop the step design:

Width _____ Steps _____
 Length _____ Curved or Straight _____
 Lighting _____

Please consider the following:

A. Compliance of site to latest site plan

- Does the site plan and layout coincide with current site conditions?
- Do the section drawings match the topography of the job-site?
- Have site utilities been accounted for?
- Are there any recommendations for changes to the site plans to accommodate the added features such as a cheek wall?
- Are their code requirements that need to be met regarding steps off the house onto a patio or stoop?
- Is a railing required to meet code?

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B. Review of reported soil conditions with Wichman Landscape Construction and if necessary a soils engineer

- Are on site soils consistent with soil parameters used in the design?
- Does the site show indications of multiple types of soils and has this been accounted for?
- Is there evidence of landfill areas on site?

C. Review of above-grade water management

- Has surface runoff been accounted for in the site design?
- Will this site be irrigated?
- If storm drains become inoperable where will the water migrate to?
- During renovation of land will temporary drainage be an issue?

D. Review of below grade water management

- How and where will drain piping be installed?
- Is it possible to vent drain pipe to daylight?
- Is venting to a storm drainage system an option?
- Will outlets be located and protected from blockage or damage?

E. Site Access

- Does the site have easy access to earth moving equipment?
- Is there a plan to remediate the property to its former condition if the equipment used to construct the walkway damages the surrounding property?
- Does the site allow for the transportation of soil either taken from or brought to the site as fill?

F. Recommended material manufacturers that supply patio paver product into the Pittsburgh region:

- <http://www.techo-bloc.com/>
- <http://www.lampus.com/>
- <http://www.unilock.com/>
- <http://www.belgard.com/>

G. Recommended Wichman social media site to view for further information and ideas.

- <https://www.facebook.com/wichmanlandscape>
- <https://www.pinterest.com/jeffwichman/>

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- http://www.houzz.com/pro/jeffwichman/_public/wichman-landscape-and-construction
- <https://www.pinterest.com/explore/stone-stairs/>
- <http://www.houzz.com/stone-steps>

When in doubt or you if have any questions, please consult with Wichman Landscape Construction.

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