Chelmsford™ Step Installation

Chelmsford Steps are 7" high x 15" deep x 48" wide and weigh 430 lbs. The solid units are comprised of a strong, dense concrete that is resistant to freeze-thaw. To avoid surface scaling, sand is recommended for traction control in lieu of deicing chemicals.

Chelmsford Steps are used as steps in free-form applications or as stairs in a retaining wall. In a wall application, they can be placed before the wall is built or installed afterwards. In either case, proper planning is needed beforehand to determine the location of the stairs within the wall and achieve a uniform opening – slightly larger than 48" wide – within the wall.

Base – A good base is essential for long term performance and stability. The base must be level and set at the proper height to ensure that at the top, the steps will meet the desired elevation. The base or footing can be constructed of gravel, poured concrete or Turfstone™.

Start by digging the footing for the bottom step. The step will sit on the footing, so plan that the top of the base will be at a height that allows the step to begin at the finished elevation of the pavement.

If using gravel, the base must be at least 12" deep, or if the soil is softer, as much as 18" deep. Use $1\frac{1}{2}$" processed gravel or $\frac{3}{4}$" crusher run road base type aggregate. Place the gravel in 2-3" layers and firmly compact until the footing has reached the desired height and is uniform in thickness.

If a concrete base is used, the pad should be 4-6" thick. You will need to build a form that is just slightly larger than the dimensions of the Chelmsford Step unit. Bagged concrete pre-blended with sand and stone is readily available and easier to work with than mixing Portland cement with aggregates. Follow the directions on the bag. When thoroughly mixed, shovel the concrete into the form and rod into place, making sure it packs into all of the corners. Level the footing with a screed board – a 2 x 4 cut to length works well – using a sawing motion back-to-front and side-to-side. This process floats the concrete and creates a uniform surface. Finish with a few passes of a wood float and let the slab set up for several days before removing the frame and backfilling with soil.

Turfstone™ is a lattice-style concrete slab that will provide better stability than a gravel-only base and is easier to work with than concrete. Turfstone is 3" thick, so reduce the thickness of the gravel footing by the same amount. Set the Turfstone units directly on the compacted gravel footing. Carefully level and fill with gravel.

Setting the First Step – Place the first Chelmsford Step onto the footing. Check to be sure it is positioned correctly and firmly seated. The step should pitch forward ever so slightly so that water will run off.

Second Step – After the first step has been placed, dig the footing for the second step and repeat the above process. The top of the footing should be high enough so that the next Chelmsford Step rests on the step in front while firmly seated on the footing. Move the second step forward until you have reached the desired depth of the tread (the area you step onto) of the step in front. Check the building codes for your area – typically the minimum tread depth is 11". This dimension needs to be consistent with each step. Make sure that both steps are straight. Measure from the front of the second step to the front of the first step on each corner. You should have the same measurement on both ends.

Additional Steps – Repeat this process until you have set all your steps.

Always wear proper safety equipment when cutting or sawing concrete products.

__Important!__ If subjected to deicing chemicals, Chelmsford Steps must be treated with a non-film forming, penetrating-type sealer such as SRW PSX.

A white deposit known as efflorescence may appear naturally on any concrete or masonry product. It does not effect the structural integrity and will diminish over time. Efflorescence is not indicative of a flawed product. For more information, ask for Ideal's Efflorescence Advisory.

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