ULTIMATE DIY HOT TUB BUILDING GUIDE

UPDATED FOR 2026

Buildahottub.com

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FOREWORD

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FOREWARD

Building a DIY Hot Tub is such a fun project. I'll be honest, when I built my own hot tub – I didn't have a clue! Looking back, it is an absolute miracle that it worked if I am being totally honest! I made every mistake under the sun!

There were no guides. No plans available just lots of calls to "John the pool man" who I am still friends with today.

Fast forward 8 years and I would like to think today I am an expert in building DIY Hot Tubs. I've helped over 1500 DIYers just like you build their own.

With my plans, parts and guidance, it makes getting the job done a lot easier. The designs are tried and tested as too are the parts and methodology so I know that it will work. Have a good read through this guide – there is a lot of information here that will save you mistakes and money.

Hope you find it useful and don't forget to get in touch for your parts supply too.

Happy Hot Tubbin'

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The structure will be of one of the options below.

POURED FORM

Pouring a form is where you are creating a mould out of wood and then filling the mould with concrete to create your walls and seats. This is a popular way of constructing a hot tub. If you do opt for this method, make sure that you brace the walls correctly as the last thing that you want is to have curved walls when you are done!

There is a huge amount of weight and pressure that is created when you pour the concrete so you need a lot of bracing in order for this to work. The end result is a perfectly cast hot tub shape. This is a great way of doing things as you are embedding all your plumbing in advance so fitting the plumbing itself is easier.

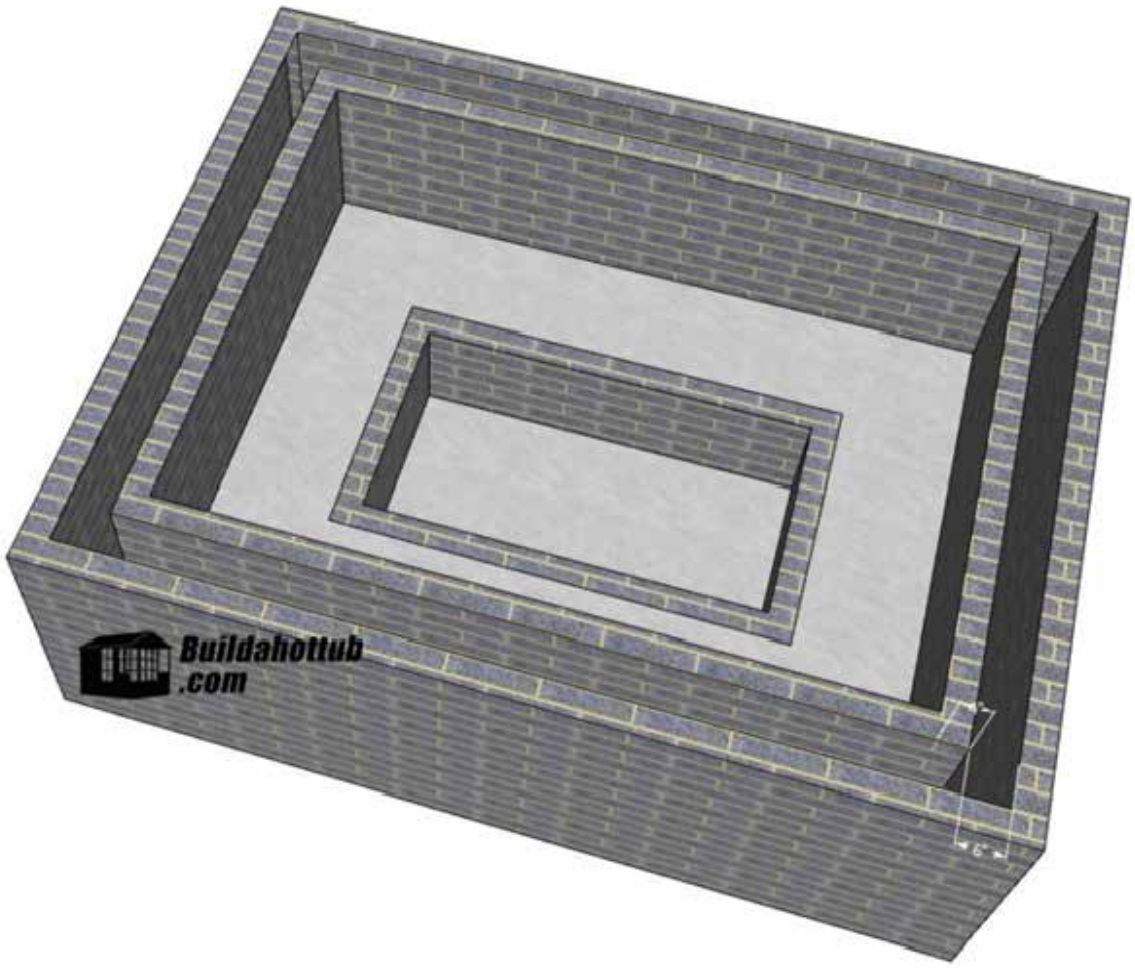
You also get a good seal around all of the plumbing components so there are less chances of leaks when you use this method.

CONCRETE BLOCK CAVITY

One of the challenges of building a DIY Hot Tub or Plunge Pool is getting the correct strength in the walls.

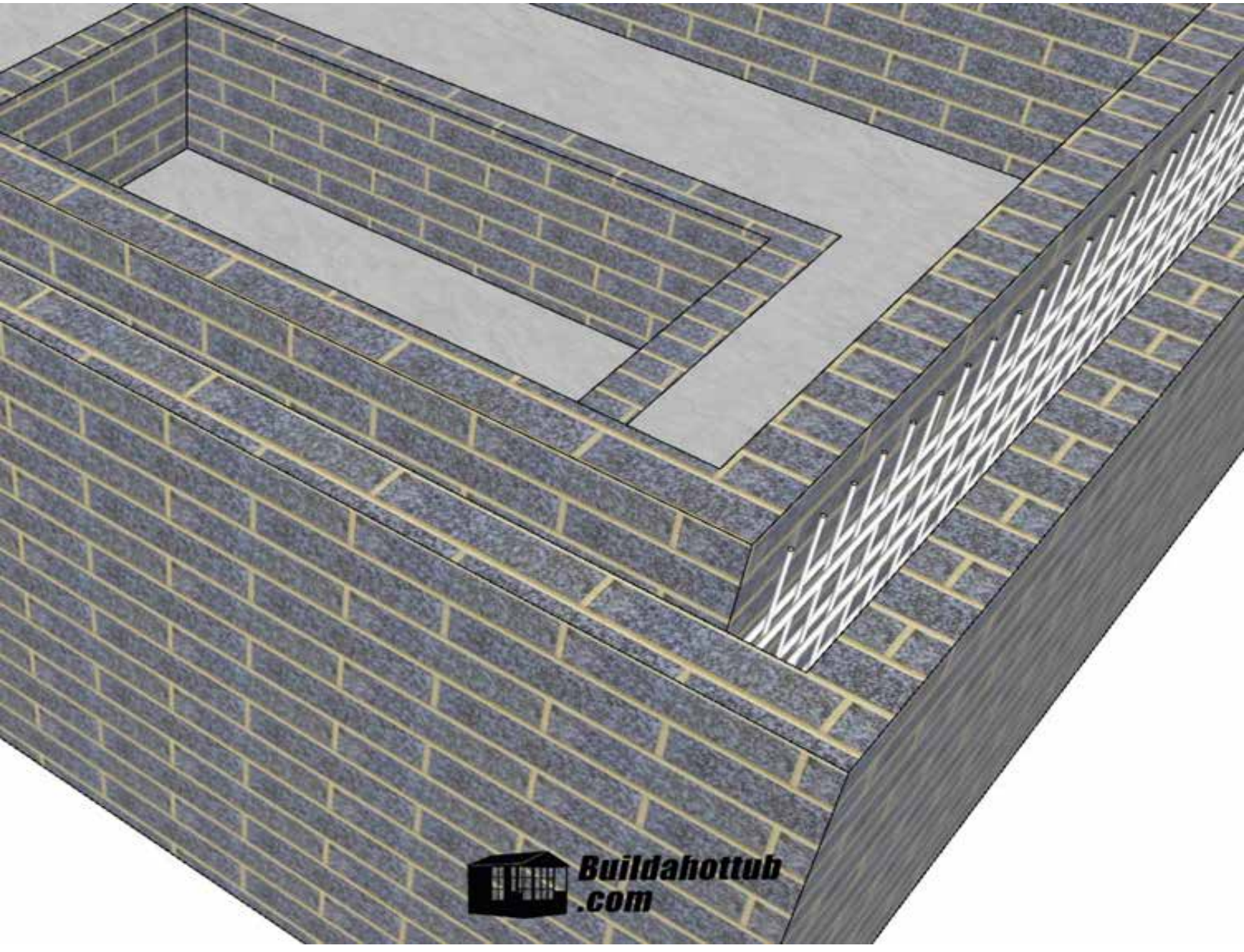
Concrete blocks are arguable the easiest way of building your hot tub. However, if you do a concrete block construction, you are going to want to have a cavity. This cavity will house not only the plumbing, but also the insulation and a rebar construction for added strength.

The downside to this method is that the final construction is quite wide, you can see the measurements below.



With a 4” block, 6” cavity and then another 4” block, you are at 14” as a minimum. With a. cap stone on this, this can look really good. Inside of the cavity you are going to house your plumbing, your insulation and your rebar.
As shown below.

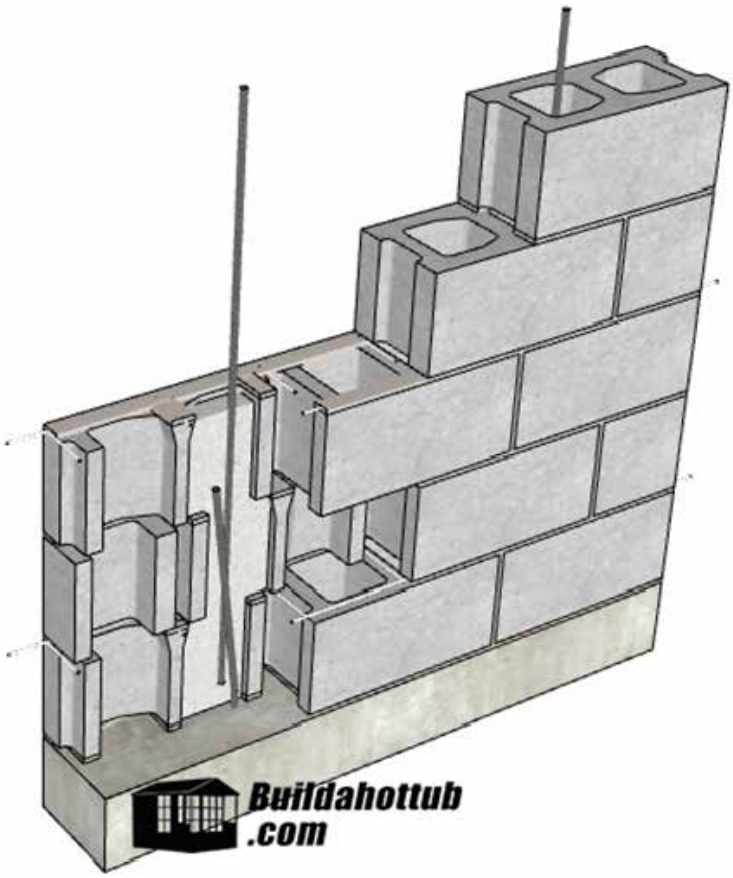
To complete the construction you will then fill the cavity with concrete and make sure it is well vibrated down.



CMU BLOCK

CMU blocks are the hollow concrete building blocks you commonly see in construction. They are cheap to buy and do a really good job of creating a strong structure for the hot tub.
You can see on the cross section drawing below that the metal rebar ties into the poured concrete base and also the walls too.

You should be rebaring every other hole so that all the blocks are tied into each other.
Once you have finished the structure, then you need to fill with concrete. The diagram also shows horizontal ties – these are optional.



ICF BLOCK

Insulating concrete form or insulated concrete form (ICF) is a system of formwork for reinforced concrete usually made with a rigid thermal insulation that stays in place as a permanent interior and exterior substrate for walls, floors, and roofs.

The forms are interlocking modular units that are dry-stacked (without mortar) and filled with concrete. The units lock together somewhat like Lego bricks and create a form for the structural walls or floors of a building. ICF construction has become commonplace for both low rise commercial and high performance residential construction as more stringent energy efficiency and natural disaster resistant building codes are adopted. This is a quick and easy way of creating your hot tub or plunge pool. The structure and the strength are already there for you. The main downside is the cost. This is an expensive way of doing things.

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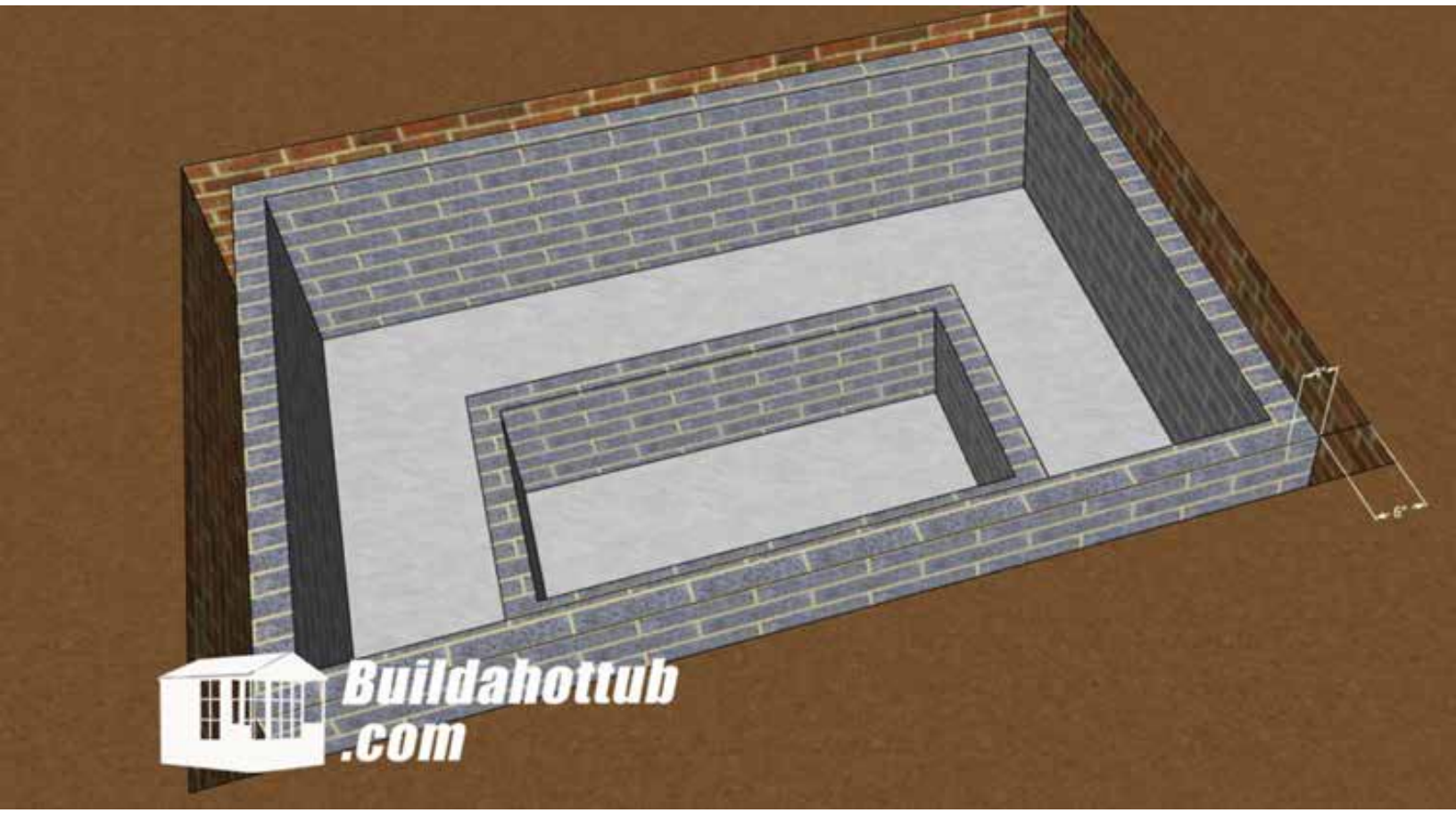
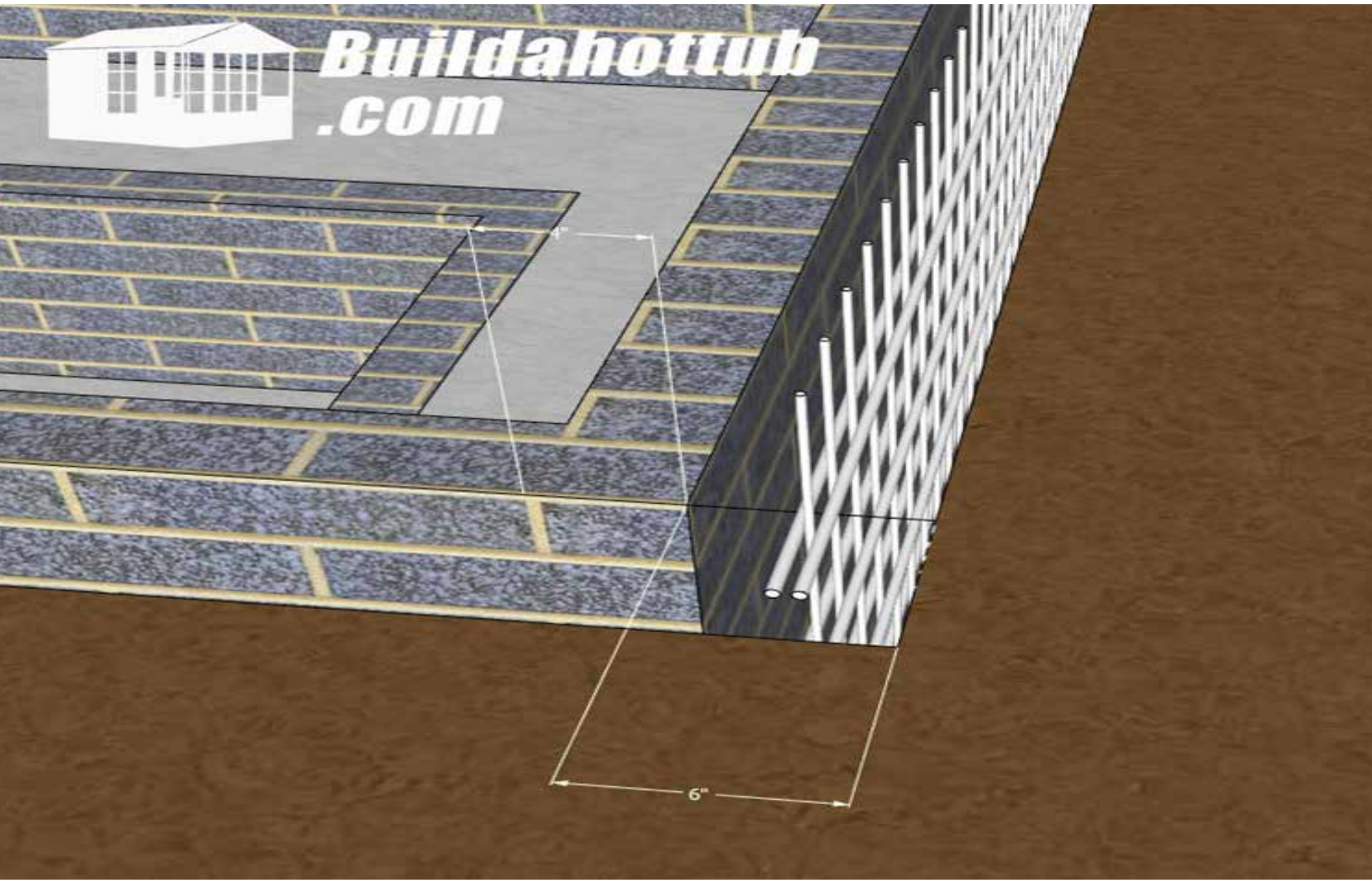
IN GROUND CAVITY

I've done a number of projects of late where there has already been a hole in the ground that the customer wanted to convert into a hot tub. This is totally fine of course. Perhaps there has been a sunken plastic shell tub that you are replacing – this is when this kind of a method would come to light.



Firstly, you need to remember that there will be plumbing and the minimum size for the Gunite Body fixtures would be 6" (150mm) cavity. You would then be able to fit insulation around the pipes and have a rebar structure inside of the cavity which you would then fill with concrete for the final stage. The drawing below shows what the construction would look like.

You can see that there is a 6” cavity with a 4” block (although 6” blocks are more common in the USA). The cavity will be filled with concrete once the plumbing is in place.



WHICH METHOD DO I OPT FOR?

Ultimately, this is down to personal preference, material availability, skill set and budget. All of these methods I have highlighted above produce a fantastic end result. The hot tub that you are dreaming of! However, each has their challenges so ultimately, you will pick the method that best suits you, your location, skillset and budget.

THE FINISH

The finish is at the discretion the Client. I recommend swimming pool tiles and waterproof swimming pool grade adhesive and grout to complete the finish. An example is shown below.

A power cord will need to be run into the footwell. Or, the cord of the LED Light will need to be extended. There should be a cavity to house 1m/3’6 of cord. This allows for the light to be serviced without the need of draining the Hot Tub. See separate section on LED Pool Light in this document. This refers to the LED light supplied by **www.buildahottub.com** – more information can be found at **www.buildahottub.com/light**