



Best wishes to you this holiday season from the team at Quantum Construction!

The Quantum Quote

Issue 6, December 2011

Merry Christmas! I hope this holiday season you're finding plenty of time for fun and family, love and laughter. As much fun as I have, I also find the holiday season to be a little stressful as I try to struggle to balance family, work and Christmas party obligations, and I haven't even touched on wading into crowded store for Christmas shopping. Yet, when I look at what I'm complaining about, I began to feel ashamed. So many people, both around here and abroad, are struggling to stay warm and fed, while I'm wondering where to spend my money. So this Christmas I'm making sure to include lots of "thank-yous" in my prayers. By the way, if you're trying to get ahold of use, our office will be closed December 26 and 27 for the holidays.

Speaking of Christmas, I'm straightening up our office here and have some fun stuff to give away. Our camo hats went so quickly last time (within 3 minutes) that I thought I'd make a few more things available. The sweatshirt, in particular, is a great one! To pick from the give aways below, **like our [Facebook page](#) and post that you're interested in the newsletter giveaways**. First responses get first pick and I only have one of each of the give aways.

Give Aways:

Not pictured: a 1.5 hour project consultation with one of our project managers (\$100 value, and no, we're not giving away project managers)



This stylish hat comes from HCI Steel, which unfortunately closed it's doors this year. Fortunately we still have a few great looking hats!



This anti-microbial, moisture wicking size XL polo comes courtesy of the SICBA golf tournament this summer.



Last, but certainly not least, is a comfy, size large hoodie from Quantum in a deep chocolate brown color that is done no justice by this photo.

Until next time,

Josh
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Battle Gingerbread

On Friday, December 2nd, a team from Quantum Construction and [JWR Design](#), with crack cake decorator, competed in Battle Gingerbread at the [Island Hospital Foundation's](#) Community Day. To set the stage, in Battle Gingerbread, several teams have up to four hours to decorate a pre-built gingerbread house.

In a brainstorming session with Brett Van Andel of JWR, Santa's Workshop emerged as our theme and we decided to throw out the supplied house and build our own for a little more design flexibility. The end design included:

- Working LED Christmas Lights
- A cut through look into the inner workings of the workshop, including a conveyor belt system
- An international airport (sled, runway, and reindeer stables)
- The North Pole
- The Claus Haus
- Elves having loads of fun, including a snowball fight and bonfire
- Disclaimer: a portion of the original house stayed as the reindeer stable

And since a picture is worth a thousand words, here are two. You can view more pictures at JWR's Facebook page [here](#) (and while you're at it, like [Quantum's Facebook page](#) too!).



Safety Corner

Cold Weather & Hypothermia

It's safe to say that we've made good progress into the winter season. All but a few straggling leaves are off the trees and the frost likes to hang out in my back yard till the sun hits it. Here are some tips for dressing and acting appropriately in cold weather, as well as reminders on

the signs and first aid treatment of hypothermia. These are just as applicable to playing in the snow as they are to working outside on a blustery, freezing day.

Always dress in layers, with a wind proof (and maybe waterproof) outer layer, removing or adding layers to regulate your body heat. Avoid getting your clothes wet, either from water or sweat, as that can ruin their insulating properties. As 50% of body heat is lost through your head, wear a hat and don't forget to wear gloves and warm socks.

The [signs of hypothermia](#) are fairly straightforward: uncontrollable shivering, clumsiness, slurred speech or mumbling, confusion or poor judgment (including removal of warm clothes), lack of concern for the situation, progressive loss of consciousness, weak pulse and slow, shallow breathing. What may not be so straightforward is that [mild hypothermia can affect the elderly or at risk, even indoors!](#) Mild hypothermia may strike the elderly at temperatures that are bearable, or even comfortable for youth and healthy adults, including poorly heated or highly-air conditioned homes. Signs may be less apparent, and include fatigue, faster breathing, shivering, confusion, lack of coordination, trouble speaking, increased heart rate and high blood pressure. Lastly, signs of hypothermia [in infants](#) may include bright red, cold skin and a severe lack of energy. If you suspect someone of having hypothermia, contact your emergency provider or call 911 and follow the first aid steps below.

The Mayo Clinic recommends the following [first aid measures](#) for hypothermia victims:

1. Call 911.
2. Be gentle. Don't massage or rub them and take care when transporting. In extreme cases, severe jarring can trigger cardiac arrest.
3. Move the victim to a warm, dry place. If not possible, shelter as much as possible from wind, water, and cold ground, covering with dry blankets or clothing. Remove wet clothing, cutting it if necessary.
4. Monitor the victim's breathing. If victim loses consciousness and stops breathing, begin CPR immediately. [If no one present is trained in CPR, begin hands-only CPR](#) (hands in the center of the chest, depressing 2 inches 100 times per minute until rescuers arrive). The survival window is only 4-6 minutes after cessation, and CPR doubles the chance of resuscitation.
5. Provide *warm, non-alcoholic* beverages if victim is conscious.
6. Do not provide direct heat (such as hot water or heat lamps), as this can trigger cardiac arrest. Provide warm dry compresses, such as those in first aid kits, a dryer-warmed towel, or *warm* water in a tightly sealed plastic bag. Apply only to chest, neck or groin; heat applied to arms and legs can force cold blood to the heart, triggering cardiac arrest. If necessary, use skin to skin contact to warm victim with your own body heat.
7. Calling 911 should have been your first step. Seek further medical attention if necessary.

Have a safe and happy winter season!

Charity Choice & Last Month's Winner

Quantum has a long history of supporting local charities, from youth sports to medical and charitable organizations. Now, we'd like you to help us choose who receives a \$100 donation for each newsletter. It's easy: just reply to this email with the name of your favorite charity! *Load the odds in your favor by forwarding this newsletter to your friends or coworkers and have them submit a response too!* Remember, it has to be a recognized non-profit. Make sure that the newsletter is at the bottom of their email, that's the ticket to making their entry count! The deadline for entries is [January 31](#), so get going!

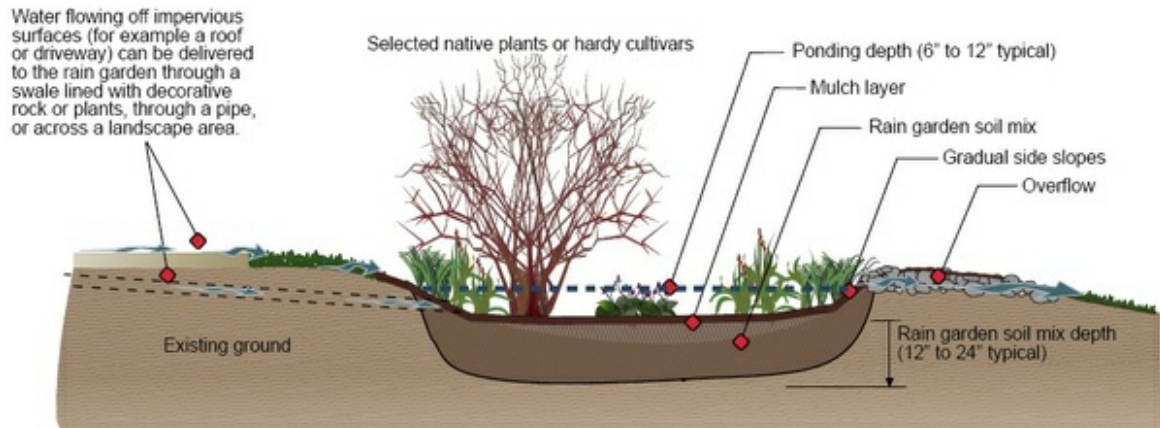
Our last winner, by a landslide, was the Anacortes High School PTSA! A key driving force at the high school, the PTSA puts on programs such as the the Reflections Cultural Arts Competition and a drug and alcohol free Senior Grad Night Celebration (I still happen to be young enough to remember all the fun I had on that crazy all night celebration!). You can find more information on their [website](#), and a huge "thank you" to all of their volunteers for investing in our youth!

Sustainable and Efficient

Rain Gardens

In our last issue, we talked about sustainable ways to landscape, touching briefly on rain gardens. A significant amount of the pollution in our Puget Sound comes from storm water run-off from developed area, run off that would otherwise be absorbed and filtered by our natural ecosystem. Rain gardens mimic these properties to direct water into the local groundwater, instead of downstream. Rain gardens are tasteful, pleasing to look at and a must-have if your property is prone to look like a flood zone after heavy rains.

That's nice, but what exactly *is* a rain garden you might ask? Simply put, it's a level depression with a mix of plants and soil designed to maximize the infiltration of water. And of course, a picture is worth a thousand words, so take a gander at the diagram below, courtesy of the WSU Pierce County Extension.



Rain gardens are an easy, do-it-yourself project, but some planning is required. First, you'll want to assess your impervious surfaces (typically your roof and driveway) and look for where the water naturally flows to determine the ideal location for your rain garden. Depending on your property, you may need more than one rain garden if you want to capture all of the run off. You'll also want to test the drainage properties of your soil and size it accordingly.

Once you get to the hands on portion of the rain garden, you'll want to excavate the site and partially backfill with a sandy compost blend to optimize your drainage, keeping enough of a pond-like depression to retain water. You'll want also want a rock-lined overflow outlet for those crazy rain storms.

Now you're onto the fun part- your plants. Rain gardens usually have three zones of vegetation, the outermost and highest preferring drier conditions and the center, lowest zone preferring the wettest. Preferred plants can include dogwoods, wild roses, rushes, beaked hazelnuts, camas and lavender. If you're planting during a dry season, you may need to water them until the plants get established.



Rain garden, City of Maplewood MN

Your rain garden is now complete! Depending on your plants and the size of your rain garden, you probably spent between \$1,000 and \$1,500, plus pizza for your volunteers. Of course, you probably want more details if you're choosing to pursue a rain garden. WSU has a great handbook put together which is available [here](#), from which a lot of this information, including images came from.

Building, Start to Finish: Part 2

In our last issue, we began a detailed look at the building process, designed to put owners' in the driver's seat of their construction projects. We covered selection of a contractor, drawing up plans, financing and permitting and insurance. This issue, we'll get started on the construction itself.

The flow chart below is our roadmap for the series. It is intended as a guideline only. Depending on the materials and specific project, some steps may be added, omitted or reordered.



Site Preparation

With your permit in hand, it's time to break ground. You'll be excavating for foundations, laying down access roads, trenching utilities, installing drain fields and septic systems, drilling wells, building retaining walls and installing temporary facilities such as power, light, water and restrooms.

Your contractor will be coordinating all of this work based on the plans you developed previously. Unless you're a heavy equipment operator, your interaction at this step will mostly be limited to taking pictures.

Tips to Success

Planning is key here. You'll see increased costs if heavy machinery needs to be brought back to the site later for additional work (mobilization costs).

Inspections

At this point, you probably just had your first experience with inspections without even realizing it. Once certain actions are completed, your contractor will call for an inspection from the applicable government organization, which is typically completed within 24 to 48 hours. If your contractor followed the approved plans with standard building practices, you'll rarely have any significant problems with inspections.

Foundation

The most common building foundations are made from concrete. Large foundations begin with a low visibility, steady preparation process, followed by a short, intense day of pouring. If you miss visiting the job site for a few days, you may unknowingly show up to a fully finished foundation!

To begin, workers will take wood or reusable form boards and create a form (mold) for the fluid-like concrete. Your contractor will also place rebar in these forms, a metal reinforcement that adds tensile strength to concrete's inherent compression strength. At this point, the contractor will also include certain imbedded objects, such as anchor bolts or post base

brackets. You'll also be subject to a rebar inspection during this time period.

Finally, you'll have a concrete pour on a dry day with little or no chance of rain. Your concrete crew will schedule concrete delivery trucks, pump trucks (if necessary), and order any necessary rental equipment, such as concrete vibrators. Depending on the size of the foundation, the pour might take a few hours or an entire day. One to three days after the pour, the crew will come back and begin "stripping" the forms from the concrete, leaving your finished foundation!

Tips to Savings

Most foundations require footings, which are often poured separately from your foundation walls. Some designs allow these pours to be combined for some cost savings. You may also be able to volunteer your time at this point, acting as a laborer or member of the crew to save labor costs. The success tips below also offer some insight into ways to save money.

Tips to Success

Planning is essential to concrete work. Pouring a 6' tall foundation wall, for example, poses a challenge for removing the interior concrete forms. Likewise, if you're adding a concrete slab to the interior of a foundation wall, you may have several hours of wait time until the slab is ready for finishing, time that could be used to strip the forms from the outside of the foundation wall. Planning reduces wasted time, costs and chances for injury in concrete work.

In our next issue we'll begin to look at framing, windows, doors and some other fun stuff. Until then, if you have questions, please don't hesitate to call or [email](#). And of course, we're always happy to provide construction management and free estimates.

[Quantum Construction, Inc.](#) is a family-owned general contractor based in Anacortes, WA.

Quantum has been building high quality commercial, custom residential and industrial projects since 1984. For information on how we can give you the best building experience, please contact us by [email](#) or by phone at (360) 293-0656.



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