



FEATURE ARTICLE: HELPING TRANSFORM BUILDERS AND SUB-TRADES INTO BUILDING SCIENCE EXPERTS AND CHAMPIONS FOR SUSTAINABILITY

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Have you ever looked at a set of building plan details where it indicates **“by others”**? I have been trying to figure out who this elusive group “by others” is, where they work out of or what they really do.

I wonder what the name of their company would be? or what their business cards would say? If I started a sub-trade company that undertook the work of the “by others”, I think my slogan would be “the stuff that nobody wants to do, even though it is sometimes the most important or critical”. I guess I am just not that creative and there is probably some catchy name or slogan that would even be better. I’m just a building scientist or at least pretend to be.

So, you are probably wondering why I am rambling on about this. The point I am trying to make is that the sub-contractor, or individual that actually has to install materials and systems is sometime forgotten. We don’t even know what to call them! We spend year’s teaching architects, engineers, consultants and have credentials and certifications for those groups. They are overseen many times by state bodies and have legislation in regard to qualifications, on-going professional development and other related requirements. Each State has an architect’s association or engineers’ association or some other professional body. For those involved in the building enclosure and building sciences from a trade standpoint, one of the only places for continued education, for the most part is carried out by the Building Enclosure Councils. Some trade associations will also provide these services, for their specific scope of work.

The sub-trade is really where the rubber hits the road. We cannot rely on making sure our building is durable, energy efficient, comfortable and manage moisture by only performing quality control (inspections, site observations) on the sub-trades. We need to work to build quality into our projects by providing the education, recognition and support system in place to allow our sub-trades to succeed. We need to provide quality assurance. We all complain about defects, poor workmanship, issues with moisture damage, poor

performance, etc. The problem is, we actually never tell, help, educate or support the trades to at least let them know how to do a good job. It is kind of like telling someone to design a building, who has never taken training and hoping it goes well. To me, you start with a foundation in building science knowledge. It does not tell you how to install an air barrier, or insulation or do air leakage control, but it does give them the answer to why they are doing something. From there, you can teach the “how to”.

The more we can arm our builders and sub-trades with knowledge and processes, the better off we will be. Better installed systems provide more sustainable buildings. I think we all can agree that when we think of a “Green” building or “Sustainable Building”, we think it is a well-built building. History, along with actual data proves otherwise. What we think and the reality is are two different things. We can have a really well-built building that performs really well, it just does not have a label or rating.

As we move further down the path of Net Zero or Zero Carbon or whatever other name, we start to give our buildings, we can’t just rely on a good product or a good design. The best product does not perform if it is not installed right.

So, how do we go about fixing this? Let’s start with some education and provide opportunities for learning, on-going and not just a one off. In some instances, I can go to school to be a journeyman carpenter. After I receive my credential, that’s it. I have no further requirements to actually prove that I continue to have the knowledge and skills to perform my work effectively with changes to building processes, materials and design.

The definition of insanity is doing the same thing over and over and expecting a different result. When it comes to construction, I always hear the same issues - poor workmanship. Maybe one day we can address the issue as my wife says I am insane enough. There is a reason I lost my hair!