

## QUESTIONS & ANSWERS FOR MODULE 5: CONTRACTING FOR PASSIVE HOUSE: CONSTRUCTION DOCUMENTS AND BIDDING

MARCH 30, 2020: DAY 1 QUESTIONS

Question	Who Asked	Answered Y/N	Answer
For DB challenges, do you see that being resolved with bridging documents?	Rob Fornataro	Y	Potentially, as requirements are conveyed through a summary of work, technical requirements, plans, etc., but hard to say as I personally have not worked directly on Design Build projects.
Delegated design has pretty severe limits in state work, so far as I know. Does anyone know more detail on this and if it can actually be used to increase ZNE achievement? That is a sub to the designer. Delegated design is a specific contractual delegation of engineering to a manufacturer.	Jodi Smits Anderson	Y but answer again due to comment received	The intended term to be used was design assist rather than delegated design. A design assist consultant helps the architect in key interfacing design details early on and staying ahead of potential constructability issues.
are you suggesting that bidders (e.g. contractors) are held accountable to EUI? How does building operation play into that?	Chris Jahn	Y	EUI being referenced here is modeled.
Can the Architect also be the PH certifier? Or should this be a third party?	Steve Fernaays	Y	To clarify, there is a difference between a PH designer/consultant and a PH certifier. The designer/consultant cannot also be the certifier. However, the designer/consultant could be the architect. <a href="https://passivehouse-international.org/index.php?page_id=221">https://passivehouse-international.org/index.php?page_id=221</a> <a href="https://passiv.de/en/03_certification/02_certification_buildings/03_certifiers/01_accruited/01_accruited.php">https://passiv.de/en/03_certification/02_certification_buildings/03_certifiers/01_accruited/01_accruited.php</a>
pg 63, right detail - what is the material between block and conc slab? Under the block, not on the outside	Megan Smailer	Y but answer again due to comment received	It is not labeled in this snip, but it's bedding mortar.
Are the use of colors in the drawings really that much of a benefit? would colored PDFs be an acceptable alternative for final construction once the bid has occurred?	Matthew Brubaker	Y	I think the use of color is helpful in that it clearly can show the different air barrier layers and how they all tie together. Not mandatory, and maybe use it only in a later drawing set, but a general recommendation.
Is there a problem with two separate layers of insulation with a complete air barrier affixed to the inside of one of them?	Jodi Smits Anderson	N	This is looked at when modeling takes place and has not come up as an issue.



slide 64 on the more "funky" detail on the left, what is the cross hatched material attached to the PSL? on the more "funky" detail on the left, what is the cross hatched material attached to the PSL?	Matthew Brubaker	N	The cross hatched material attached to the PSL is Armatherm.
These details are great. What processes can be employed in contracting to ensure they are done. Are we going to be learning about site inspections and specific performance tests to include in contracts?	Jodi Smits Anderson	N	Some of these were covered (air tightness targets of fenestration, the air barrier system test spec section, the mock-up spec section). Our experience is that inspections are hired directly by the owner to avoid any conflict of interest and therefore are not always directly included in contract documents.  Module 8 will get into inspections and specific tests that can be utilized on projects.
Slide 68 - where the mineral wool blocks up the rain screen brick assembly, are there weeps above and below that fire stopping? how did this turn out in construction phase?	Matthew Brubaker	N	There was another consultant on the project looking at waterproofing so we did not watch for weeps very closely. The mineral wool was installed as shown during the construction phase.
does stainless steel perform better than galvanized thermally?	Chris Jahn	N	Yes, see our <i>High Performance Walls Guide</i> , page 4. <a href="http://www.swinter.com/wp-content/uploads/SWA_High-Performance-Walls-Handout.pdf">http://www.swinter.com/wp-content/uploads/SWA_High-Performance-Walls-Handout.pdf</a>
RE CX - are we going to go over what is needed for BECx in order to ensure performance? I think this is a big part of emerging contracting issues...	Jodi Smits Anderson	N	Unfortunately, not covered in this presentation given the number of topics to cover and the time constraints.
What about performance specs versus materials specs?	Jodi Smits Anderson	N	Mentioned on slide 118.
Are there equivalent products for Aroseal? Typical state requires open spec	Chris Jahn	Y	Not directly. There is a 'spray type' sealant however it is unclear how often this is used or how successfully it has been implemented. Aroseal is really the only option we have seen to be used.
slide 131 - in the detailed mock up detail - would you also include mechanical penetrations?	Matthew Brubaker	N	Yes, it would be a good idea to include those as well where feasible.
mockups can't be done until windows are on site - will wall construction go too far before that?	Megan Smailer	Y	Typically, there is a window mock-up unit submitted, reviewed, and approved that is sent to the site well before the other windows. This is used for mock-up purposes before construction gets too far along.



I have heard that windows don't often perform as cited on stickers, esp. for air leakage. Should contracts require testing of a certain % of delivered units?	Jodi Smits Anderson	Y	Yes, it would be a good idea to include a percentage of windows to be tested by an intendent third party.
Why do you think that there is not more consistency between rating systems for commissioning?	Tom Kelly	Y	Unclear, but each entity has identified what they feel is important to the Cx process. Perhaps a group like the BCxA could help make a more unified standard. <a href="https://www.bcxa.org/knowledge-center/">https://www.bcxa.org/knowledge-center/</a>
Can you provide guidance or references for incorporating Passive House / Zero-Energy goals into design/construction contracts? The Agreements, Not the Contract Documents	Dave Parker	Y but answer again due to comment received	Have the requirements written into the contract language, like any other project requirements.  This example may be a helpful starting point – <a href="https://www.aiacontracts.org/contract-documents/25161-sustainable-projects-exhibit">https://www.aiacontracts.org/contract-documents/25161-sustainable-projects-exhibit</a>
Just a note - IPD only works if it goes beyond the contractual agreement to truly trusted collaboration and sharing of the successes and the risks. It fails if it is merely a paper contract. The "local" expert on this is, in my opinion, Adam Cohen.	Jodi Smits Anderson	Comment	Thanks for the feedback.
We have found that the EUI targets need to be very well informed, and that development needs to be included in the outreach in order for people to trust it.	Jodi Smits Anderson	Comment	Thanks for the feedback.
The above the non-negotiable goals, the other list needs to be in priority order in order to get equitable bidding. The bidder that achieves the most of the prioritized goals in addition to the non-negotiable, within the NTE budget, gets the work. This is from NREL successes...	Jodi Smits Anderson	Comment	Thanks for the feedback.
It's great that the parapet detail starts to talk about constructability. Coordination can be an issue between roofing subs and GCs...	Jodi Smits Anderson	Comment	Thanks for the feedback.
And MSTBA may be a place where design delegation is possible (and preferable).	Jodi Smits Anderson	Comment	Thanks for the feedback.
One thing people don't understand is that energy codes for the air barrier to be complete, and aligned and affixed to the thermal plane.	Jodi Smits Anderson	Comment	Thanks for the feedback.



## MARCH 31, 2020: DAY 2 QUESTIONS

Question	Who Asked	Answered Y/N	Answer
Slide 28, Vertical axis is cost for change??	Bill LaBine	Y	It is showing the amount of time spent on activities. The design is heavy up front and tapers off as it gets closer to the start of construction. Then, construction begins and take-offs to assemble the building to a final product.
Is the design-build bill you mentioned applicable to SUNY projects? If not, are SUNY campuses allowed to do design build?	Indumathi Lnu	Y	The article referenced in the slides is only referencing NYC construction projects.
For buildings on campuses should faculty be involved who want to incorporate the building into the curriculum?	Mark Bremer	N	Yes, it would be a good idea to include them if feasible.
Do you know if SUNY allows contractors to be selected based on best value instead of just lowest cost so we can evaluate bids based on prior experience, interviews, etc	Indumathi Lnu	N	I would recommend that you reach out directly to SUNY to confirm. It depends on the project type, agency (DANSY, State University Construction Fund, etc.) and other project factors that will influence the answer.
For slide 62 do you need to cure the work slab before putting insulation on top and then pouring another slab	Annette Barnes	N	Yes, the work slab was cured before any insulated was installed on top of it.
Why the parapets required all around wrapping insulation and not only in the joint area with the slab? Is it because of the thermal bridge?	Monica Berroa	Y but elaborate on slab to stem wall.	Wrapping the parapet mitigates thermal bridging. Another strategy is to use an AAC block at the starter course of the parapet wall.
slide 66 roof counterflashing is "inside" insulation? how does it get removed and reinstalled for re-roofing?	Scott Perry	Y	This was drawn incorrectly; it did not actually end up there.
Do you have a recommendation for an alternative to Spray foam insul in this garage detail?	Michael Burgess	N	Rigid insulation boards attached directly to the ceiling with no gaps could be another strategy.
is SWA Air Sealing Guide available?	Bill LaBine	Y	Yes. <a href="http://www.swinter.com/wp-content/uploads/SWA-MultifamilyAirSealingGuide-Steel.pdf">http://www.swinter.com/wp-content/uploads/SWA-MultifamilyAirSealingGuide-Steel.pdf</a>  <a href="http://www.swinter.com/wp-content/uploads/SWA-MultifamilyAirSealingGuide-Wood.pdf">http://www.swinter.com/wp-content/uploads/SWA-MultifamilyAirSealingGuide-Wood.pdf</a>



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For slide 75, why do you use the green line - closing the wall off from the window?	Elizabeth Freund	Y but follow up	To close off the cavity, for NFPA 285.
Have you done any analysis of the life-cycle cost effectiveness of various details. Some details may result in significant carbon reduction. Others may be costly with less carbon reduction.	Douglas Mitten	N	This is a new hot topic but has not really been performed yet to date.
Are you going to cover how we can ensure that the spec requirements are met during submittal review process?	Indumathi Lnu	Y	I believe this was covered, however the person responsible for reviewing the submittals needs to approve or reject based on if spec requirements are being satisfied.
slide 176 what's the middle picture showing?	Bill LaBine	Y	This is the preparation to test the installed door. It's a plastic sheet being used to create a chamber that we will then use a fan to pressurize and evaluate the leakage.
Any experience with specifying project super be trained to a higher level, and they become "responsible" for the work of his/her people?	Scott Perry	Y	Yes, we have seen projects where the main super attends the Certified Passive House Tradesperson class and then can help inform and watch his workers and subs.
Is it possible to get access to the recordings of earlier modules we may have missed?		N	<a href="https://www.newpaltz.edu/sustainability/view-programs-and-progress/zero-net-carbon-training/zero-net-carbon-webinars-and-presentations/">https://www.newpaltz.edu/sustainability/view-programs-and-progress/zero-net-carbon-training/zero-net-carbon-webinars-and-presentations/</a>
I'm facing a large MF project in NYC, and am not familiar with code requirements there. How much of the components PHI refers to as "downpipes" (rainwater leaders, sanitary plumbing vents, radon vents, etc) are required by by NYC codes to be steel or iron piping instead of less conductive plastic piping, and why did some of the details, such as an interior roof drain/ rainwater leader not have insulation around it where it passed through the slab? Do NYC code officials ever accept Air admittance valves in conjunction with positive pressure relief systems at sewers as replacement for all plumbing vent stacks through roof?	Survey	N	There is an interesting article on this here – <a href="https://www.nypassivehouse.org/aavs-air-admittance-valves/">https://www.nypassivehouse.org/aavs-air-admittance-valves/</a>  NYC code requirements for plumbing would be best answered by a qualified plumbing engineer.