

LEED for New Construction and Major Renovation (NC): The Role of Furniture

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FAQs: Common questions related to this topic:

- ? What LEED-NC points can furniture help me to get?
- ? What design and selection support can Allsteel provide?
- ? Can't I apply the recycled content of furniture to LEED-NC 4.1/4.2?
- ? Can furniture help me to get an Innovation and Design point?

? **What LEED-NC points can furniture help me to get?**

Because LEED-NC is focused more on the building and its surroundings, furniture is not usually included in LEED-NC credit achievement. A number of credits in Materials and Resources allow the use of furniture in the calculations, but it is not required and can cause some inconvenience (see third question, below). There are certain cases when furniture can support an Innovation and Design credit (described below). It should be noted that if an organization is going to the trouble of building green, it makes sense to choose furniture that meets the requirements of LEED for Commercial Interiors in order to maintain that "green mindset" into the building (but without the paperwork headache of calculating the furniture into the credits). Why build a tightly sealed building with natural light pouring in, then seal the people inside with furnishings that block the light and off-gas into the air?

? **What design and selection support can Allsteel provide?**

LEED-CI (Commercial Interiors) is about the tenant space inside the building so its credits impact design and selection of furnishings. In a building seeking LEED-NC certification, it makes sense to use those same principles even if no points are sought for doing so. The following points clarify LEED-NC's potential relationship to furniture with some suggestions for furniture design and selection—for whoever (owner or tenant) ultimately chooses the furniture.

- ❖ **Recycled content of furniture.** Refer to *The Materials and Resources Dilemma*, below.
- ❖ **FSC certified wood and rapidly renewable resources.** Refer to *The Materials and Resources Dilemma*, below.
- ❖ **Lighting—energy.** LEED NC's Energy and Atmospheres (EA) Prerequisite 2 and Credit 1 will involve a lot of technical modeling of energy use for the building, including interior lighting. Although it won't be part of the calculation for the building, it may be reasonable to design furnishings for the use of workstation task lights that are energy efficient. Those with electronic ballasts (not magnetic), compact fluorescent bulbs or LED are energy efficient suggestions. Furniture selections to allow daylight deeply into the space also help the client to save lighting energy.
- ❖ **Lighting—controllability.** LEED-NC's Indoor Environmental Quality (EQ) credit 6.1 is about controllability of lighting but since it's about the building, the designer may not be looking at workstation lighting yet—but they might. The building is likely to have fewer ceiling-mounted rows of lighting fixtures due to energy saving measures so workstation task lights could be a consideration. Controllability means that 90% of occupants can turn their light on and off, at a minimum. Ideally, they should be

repositionable, with multiple light levels, and occupancy sensors. They do not have to be permanently wired.

- ❖ **Thermal comfort—controllability.** (LEED-NC EQ 6.2) Although furniture has little impact here, it is possible that the builder will be installing raised floors to move air below the workspace. If so, the raised floor will be in movable units (much like a dropped ceiling) so there will be movable floor vents, one should be in each workstation. Some attention to design is needed to be sure that those vents are not under solid furniture pieces that would block airflow.
- ❖ **Daylight and views.** LEED-NC EQ 8.1/8.2 encourages a connection between building occupants and the outdoors through daylight access and views. Furniture is not part of the calculations but selection of furniture can later impact the occupants' access to daylight if designed wrong.
 - **Daylight.** LEED-NC's EQ 8.1 requires that 75% of all regularly occupied areas have access to daylight. Since LEED-NC is about the building, measurements are of the amount of light that hits and penetrates into it (in footcandles) and the size of windows (glazing). Usually, walled offices will be in the core of the space not around the periphery. Furniture is not part of the calculation, but it would not make sense to select furniture that blocks the daylight once it's moved in. Choose furniture that allows light deeply into the space by using lower panels near windows and setting taller features perpendicular to windows.
 - **Views.** LEED-NC's EQ 8.2 is for views to the outside in 90% of the spaces—a difficult credit to achieve. In NC, furniture is excluded from the calculations to be submitted, but, like EQ 8.1, if a client is going for this credit, it makes sense to select furniture that allow for those views.
- ❖ **Low emitting materials.** LEED-NC has credits for low emitting adhesives and sealants (EQ 4.1), paints and coatings (EQ 4.2), carpet systems (EQ 4.3), and composite wood and agrifiber products (EQ 4.4) but since NC is about the building, none of these are about furniture. LEED-CI has EQ 4.5, which is about low emitting systems furniture and seating, but LEED-NC does not have that credit so it is possible to use it as an innovation. Refer to the question below regarding Innovation Credits for details.

? **Can't I apply the recycled content of furniture to LEED-NC 4.1/4.2? (The *Materials and Resources Dilemma*)**

Due to office furniture's recycled content, there is a temptation to include it in the calculations for LEED-NC's MR 4.1/4.2, which is allowed, but not required in NC. This is unwise to do because if furniture's contributions are calculated in this credit, then furniture must also be included in the calculations for MR 3 (materials reuse), MR 5.1/5.2 (regionally extracted and manufactured), MR 6 (rapidly renewable materials) and MR 7 (certified wood), as well. This requires a lot more work for the owner/developer, and usually does not help with achieving those points. It makes more sense to use those credits as guidance for environmentally smart choices, without including them in LEED-NC calculations. Using furniture in an innovation credit with Cradle to Cradle products also forces the use of furniture in the MR credits.

? **Can furniture help me to get an Innovation and Design point?**

Innovation borrowing EQ 4.5 from LEED-CI

LEED-NC does not include the EQ 4.5 credit for low emitting materials (systems furniture and seating) which is in LEED-CI (Commercial Interiors), so it may be possible to use it as an Innovation and Design credit in an NC project. The first determining factor is whether the organization that is building the LEED building will be its only tenant or by some other means has control over all the furniture to be placed into it. If the building is a commercial office building that will have many different tenants, then this Innovation credit won't work.

If the organization does have control over the furniture purchases, then the second determining factor is that they cannot order vertical veneer on their systems furniture because it currently off-gases too much* to meet the requirements of LEED CI EQ 4.5. (Veneer can be used on free-standing private office furniture and in conference rooms, which is not part of the EQ 4.5 credit.) If the furniture selected meets those qualifications, then it is possible to proceed. The supporting documentation will be the same as for LEED-CI EQ 4.5 Option C so the client will need the SCS Indoor Advantage certificates for the furniture. The project's LEED Accredited Professional is likely to know how to submit the Innovation and Design credit materials, but Allsteel can assist if needed.

*Allsteel is researching a new finish but there is no certainty when it will be available.

Innovation using Cradle to Cradle certified products

Although Allsteel has systems (Stride) and seating (Acuity) that are Cradle to Cradle (C2C) certified silver, it is unwise to use it in a LEED-NC innovation for the same reason as described in the dilemma section. Doing so forces the client to include furniture in the MR calculations listed in the previous question. It still makes sense to use C2C certified furniture for its benefits to the environment, just don't count it into the calculations.

SUPPORTING DOCUMENTS & RESOURCES

- LEED NC Rating System. Free on USGBC website (www.usgbc.org)
- LEED NC Reference Guide. Available on USGBC website for a price
- Allsteel's certificates for SCS Indoor Advantage certification (if going for the Innovation credit). Available on www.allsteeloffice.com/AllTogetherNow , in the LEED section, Indoor Air Quality.