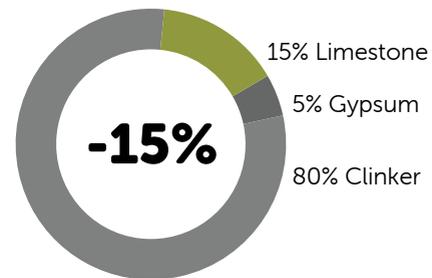




The Whole Building Life-Cycle Analysis performed for the building shows that concrete and reinforcing account for 72% of the total Global Warming Potential (GWP) impacts of this building, and therefore were an important target for GWP reduction.

Supplemental Cementitious Materials (SCM)s can replace some of the emissions-intensive portland cement in concrete. Extending the cure time from a 28-day test strength to a 56-day test strength further reduces the amount of cement needed to reach required strengths.

The design team used these strategies to achieve a 41% reduction in the GWP impact of this building from standard construction!



Type 1L Cement used in all mixes

What is an SCM?

Supplemental Cementitious Materials, or SCM's, replace carbon-intensive cement with less intensive materials. Type 1L cement replaces up to 15% of Portland cement with limestone. The remaining 85% of cement can still include additional SCM's, like slag, which further reduce emissions. The percentages of SCM's in the Library Commons' mix designs are varied by the structural requirements of different building elements. The combined reductions in Global Warming Potential (GWP) are shown to the right. (Type 1L + SCM's)

*design values

