SECTION 03 30 00 – CAST-IN-PLACE CONCRETE

SUBMITTALS (added language)

* + - * 1. Environmental Product Declaration (EPD): Submit in accordance with the Specification Section for LEED Submittals, Section 013510.01.B.1– Environmental Product Declarations.

Submit a product-specific EPD for 90% by volume for all concrete mixes used in the project in the “Concrete Mix Specification Table” within the Concrete section of the structural general notes.

Impact Categories:

Global Warming Potential (GWP): All GWP information submitted shall be in the form of kgCO2eq/kg.

Ozone Depletion Potential (ODP): All ODP information submitted shall be in the form of kgCFC-11/kg.

Acidification Potential (AP): All AP information submitted shall be in the form of kgSO2/kg.

Eutrophication Potential (EP): All EP information submitted shall be in the form of kg N/kg.

Smog Formation Potential (SFP): All SFP information submitted shall be in the form of kgO3/kg.

Non-Renewable Energy Consumption (NREC): All NREC information submitted shall be in the form of MJ.

Plant-specific GWP information will be one of the decision criteria when awarding this scope. However, information for each impact category noted above will be reviewed. The impact category information will be evaluated against both industry average impact category datasets, as defined by National Ready Mix Concrete Association (NRMCA) regional mix EPD datasets, as well as the impact category information reported within mill-specific EPDs from competing bidders. If mill-specific impact category information is not provided, industry average EPDs will be used.

*Background for Engineer: The EPDs requested within this specification are critical for meeting targeted LCA LEED points, and for attempting through an LCA to measure total building carbon footprints. When product specific EPDs are not provided, the specification defaults to the industry average EPDs where available. Industry average EPDs will carry a range of potential embodied carbon footprints. If the primary goal when using this specification language is to measure total building carbon footprints and to incentivize suppliers to provide product specific EPDs that meet or beat the industry average, the specifier may choose to apply the upper bound results from the industry average EPD, or a 1.15 penalty factor should a range not be identifiable within the industry average EPD. This penalty would apply to the suppliers that don’t provide product specific EPDs compared to those that do provide product specific EPDs*.

*If you are requesting EPDs to achieve LEED v4 points, the specification language should emphasize the importance of producing product specific EPDs for the relevant impact categories. Coordinate with the general contractor to ensure that appropriate language regarding EPD submissions is included in the bid documentation communicated with the subcontractors.*

* + - * 1. Recycled Content Documentation from Materials Suppliers: Submit in accordance with the Specification Section for LEED Submittals, Section 013510.01.B.3 – Leadership Extraction Documents.
        2. Bill of Materials: Material supplier(s) shall provide a report to the General Contractor, at the completion of 100% Construction Documents, or as soon thereafter when the material sources are known, and at the completion of the primary structural frame, summarizing all concrete quantities and the location where each material was obtained. Each unique mix design used on the project shall be itemized.

In addition to the requirements above, report the following in cubic yards for concrete and itemize as required for each unique mix design:

Total Concrete Volume

**NOTE TO ENGINEER: Italicized items below are not required for LEED v4. Consider including only if will not adversely affect cost.**

*Concrete Volume used in Foundations*

*Concrete Volume used in Horizontal Applications, e.g. Slabs/Beams*

*Concrete Volume used in Vertical Applications, e.g. Walls/Columns*