

2021 SDC - Architectural & Environmental Deliverable

Background and Problem Statement

In September 2014, it was announced that Seattle has been awarded a 5-Star community rating for sustainability. Seattle is known for being one of the greenest and most environmentally friendly cities in the United States. Additionally, the Seattle skyline boasts a collection of buildings with striking architectural designs and facades. As described in the geotechnical and structural deliverable documents, your company has been tasked with a project to design an on-top addition to an existing hospital building in order to increase the hospital capacity to accommodate the stress on the Seattle Area Hospital System arising from the COVID-19 pandemic. The task for the architectural department in your firm is to redesign the facade of the existing hospital and to fully design the new on-top addition for the building. Your building should feature efficient and creative approaches to minimize the building's carbon footprint.

Architectural and Environmental Challenges

1. Design the facade of the hospital structure. Consider how the building fits into and draws inspiration from the Seattle area. Also consider the environmental effects and cost of your design.
2. Develop a 3D architectural rendering of the exterior of your building. Include your design of the on-top addition in your rendering. Provide a rendering image on the title page of your deliverable submission. Choose a concept for your design and illustrate it in your rendering.
3. Consider the internal operation of your building. There are many restrictions and considerations that need to be accounted for in the architectural design of a hospital. Conduct research to explore these requirements for hospital buildings. Determine the layout of rooms and describe the circulation of occupants within your hospital using simple schematic drawings. Consider how the layout would best equip treatment during the COVID-19 pandemic.
4. Your firm is targeting a LEED BD+C Healthcare certification. In your pursuit to achieve this certification, there are many points that need to be accomplished in the design (exterior and interior), as well as the choice of materials. Check [LEED Credit Library](#) for further understanding of the points that your architects need to consider. Describe the measures taken by your architects to achieve LEED points and minimize the negative environmental impacts of the building.