



Camp Courageous Cultural Education Center

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Project Overview and Site Location

The cultural education center will give campers the opportunity to be immersed in the natural habitat of northeast Iowa year-round and provide a close-up view of wildlife. The proposed site will be located in the forested area on the northeast side of the property and connect to the proposed trail system.



Design Methods

The cultural education center and the surrounding site were designed in accordance with the International Building Code (IBC), the Iowa Statewide Urban Design Manual (SUDAS), and ADA Standards for Accessible Design. Additionally, the seven Universal Design Principles were integrated into the design. The applied loads used in the design of the building, foundation, and retaining wall were selected by utilizing the ASCE 7-16 Standard. The sizing and spacing of the structural members was determined by employing the Load and Resistance Factor Design method (LRFD) and the AISC Steel Construction Manual.

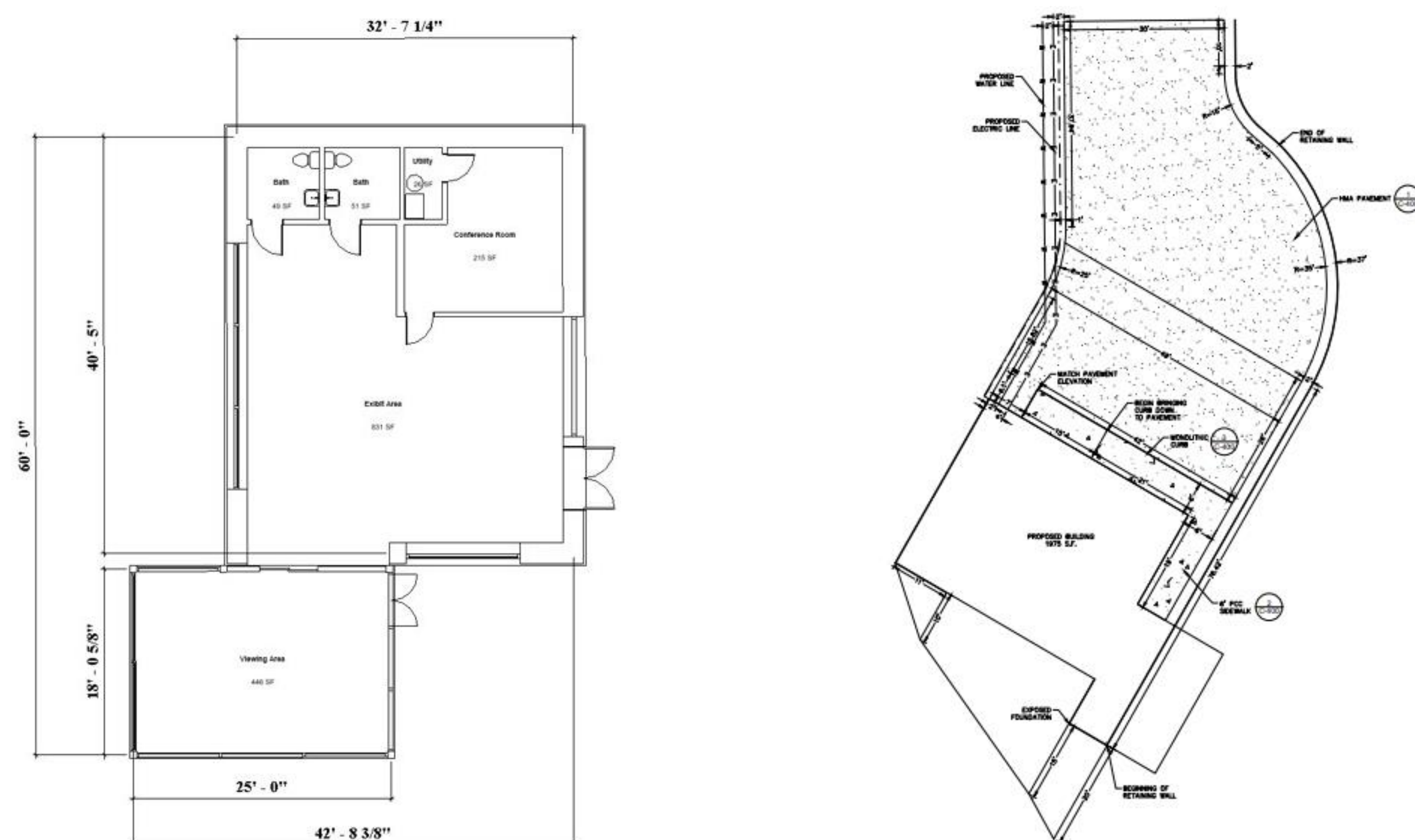


Figure 2. Floor Plan and Site Layout

Final Design

The building will consist of a wildlife exhibit area, a conference room for educational presentations and activities, and an indoor viewing area overlooking the valley.

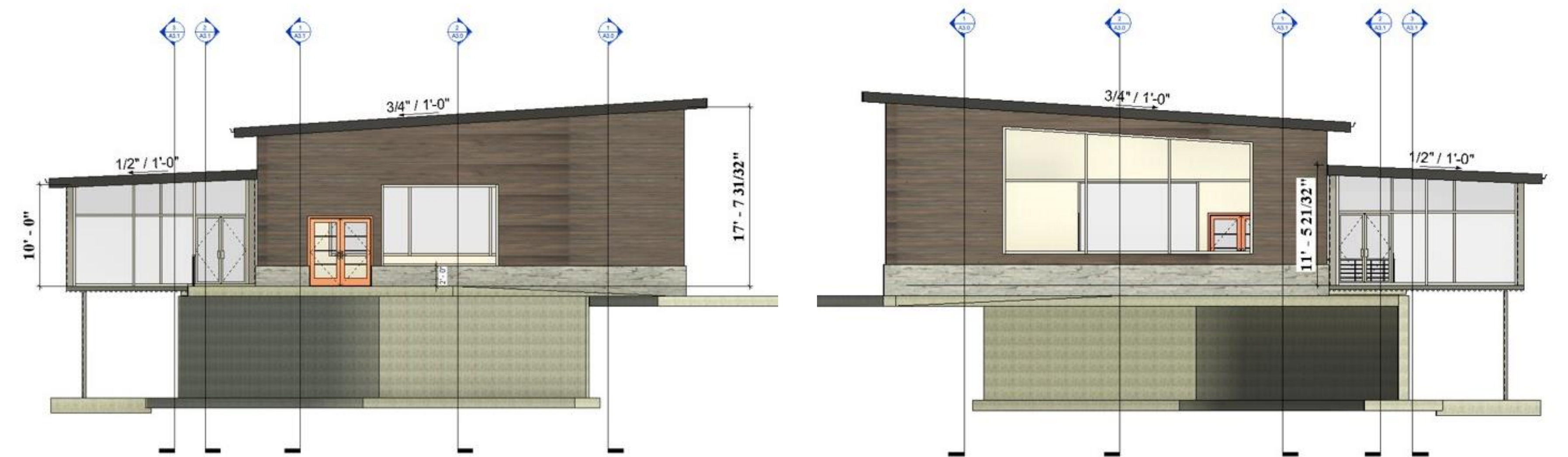


Figure 3. East and West Elevation Views of the Building



Figure 4. North and South Elevation Views of the Building

Recommendations and Total Cost

The team recommends the proposed site location for the optimal viewing of various topographic features and its suitability to cultivate animal wildlife viewing. Furthermore, we recommend the use of steel framing members for longevity in a wooded area. The total cost of the cultural education center is estimated at \$700,000 which includes the material, labor, overhead, and contingency costs.

References

2018 International Building Code (IBC), Iowa Statewide Urban Design Manual and Specifications (Iowa SUDAS), 2010 ADA Standards for Accessible Design, ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other Structures, and the AISC Steel Construction Manual.