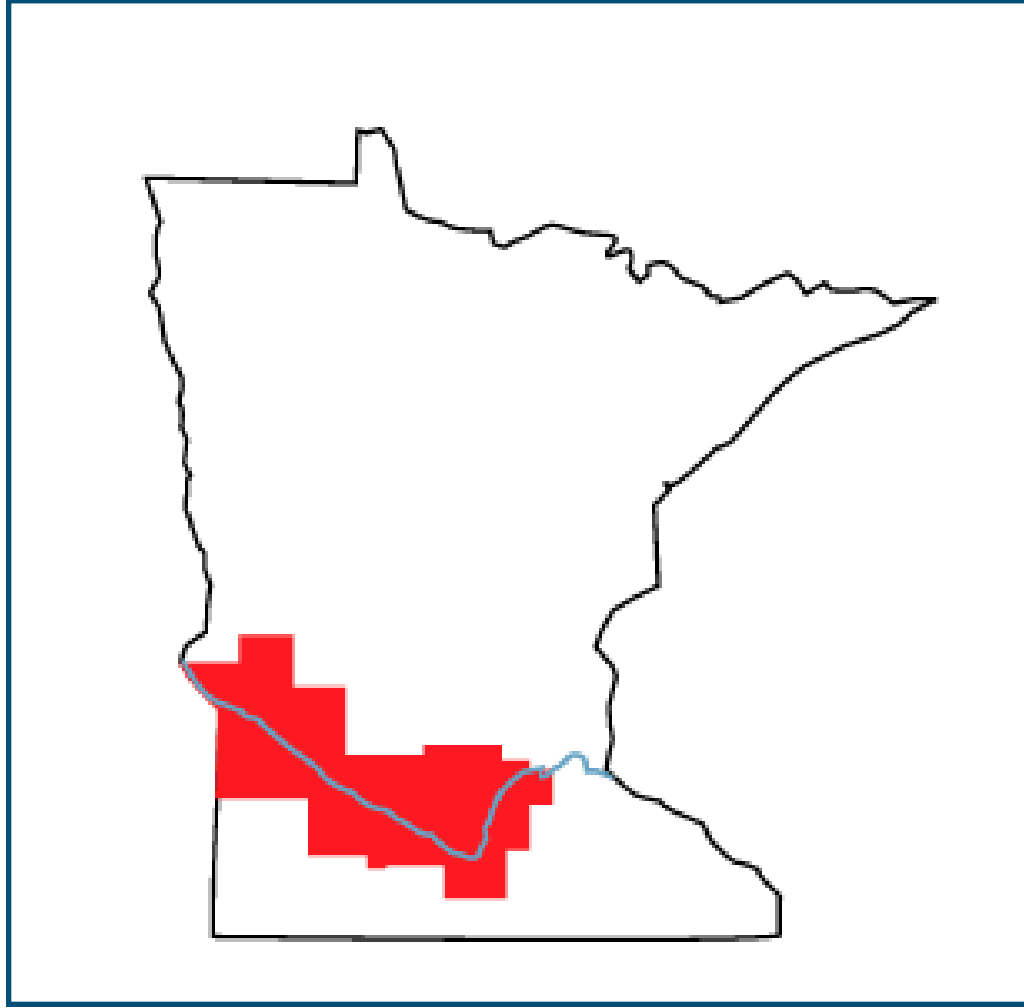


MINNESOTA RIVER

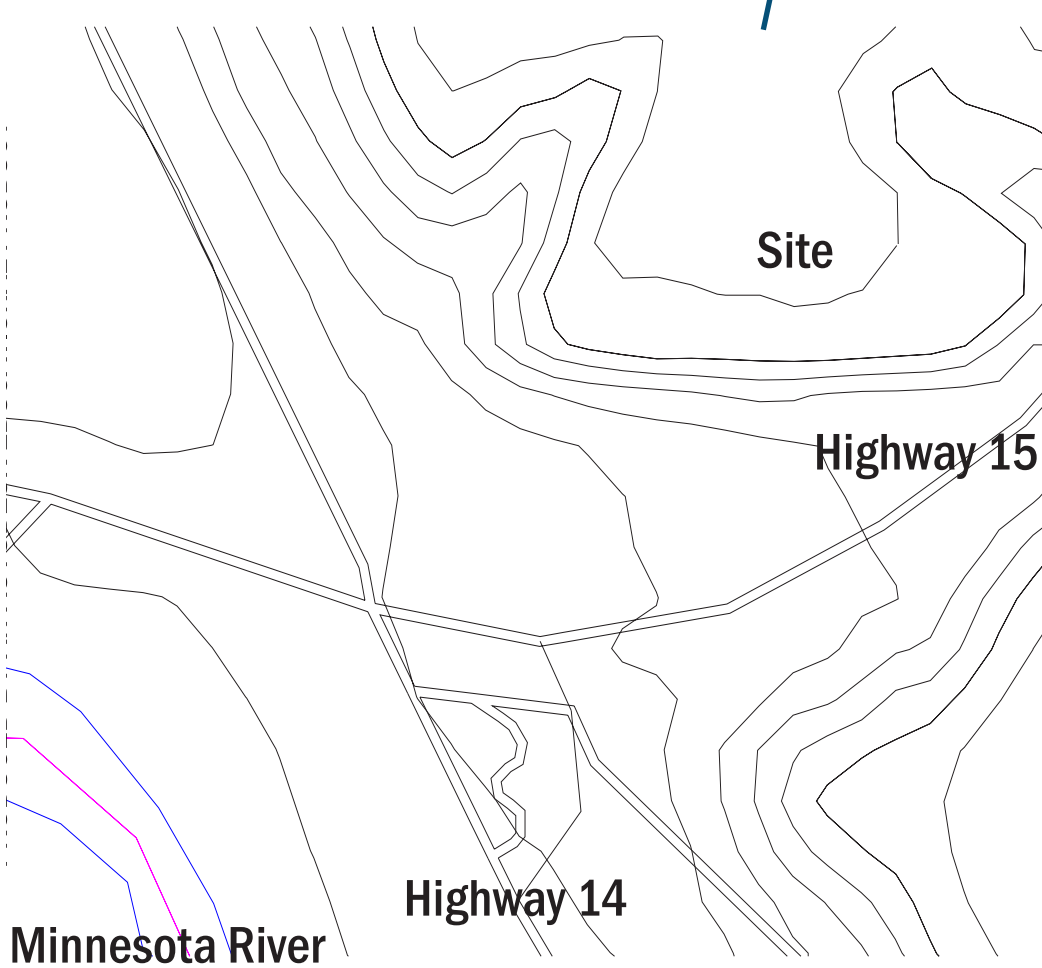
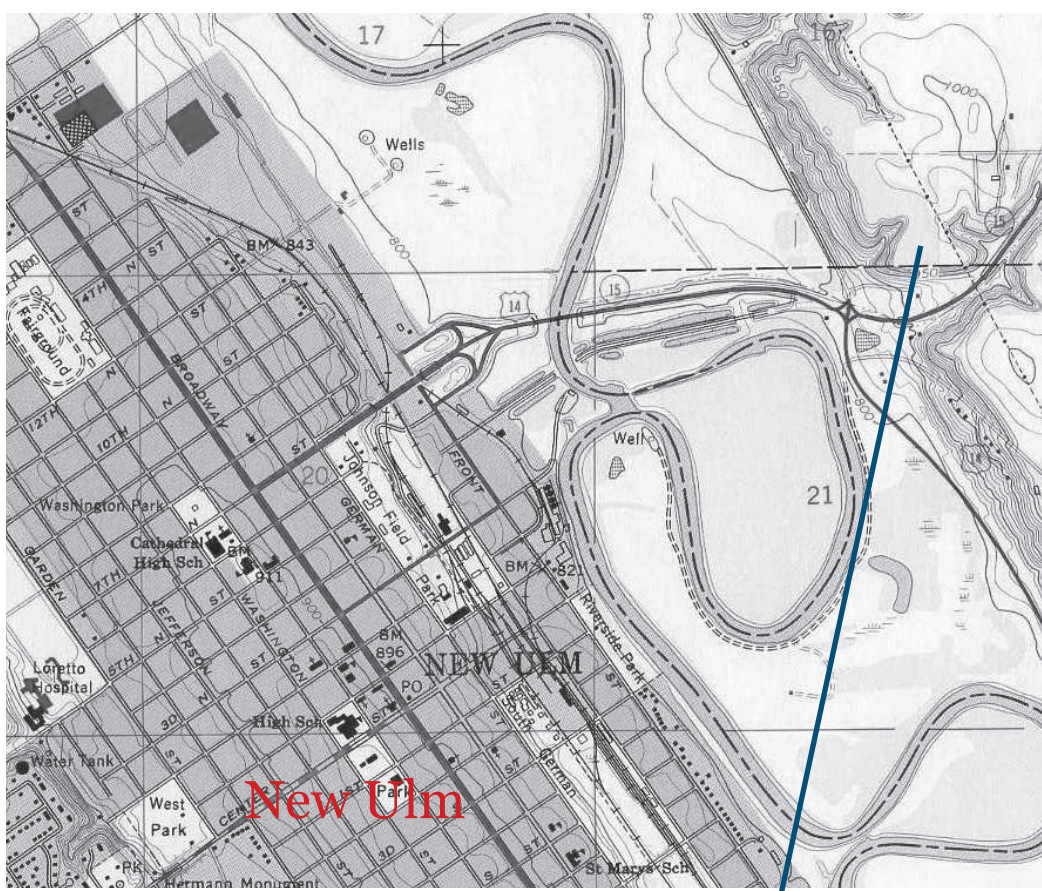
INTEGRITY

Historians and cultural geographers consider "integrity: to be an honest and accurate reflection of cultural sources, legible in evolved physical features. The Minnesota River Valley landscape has a high degree of integrity based on these criteria.



UNITY

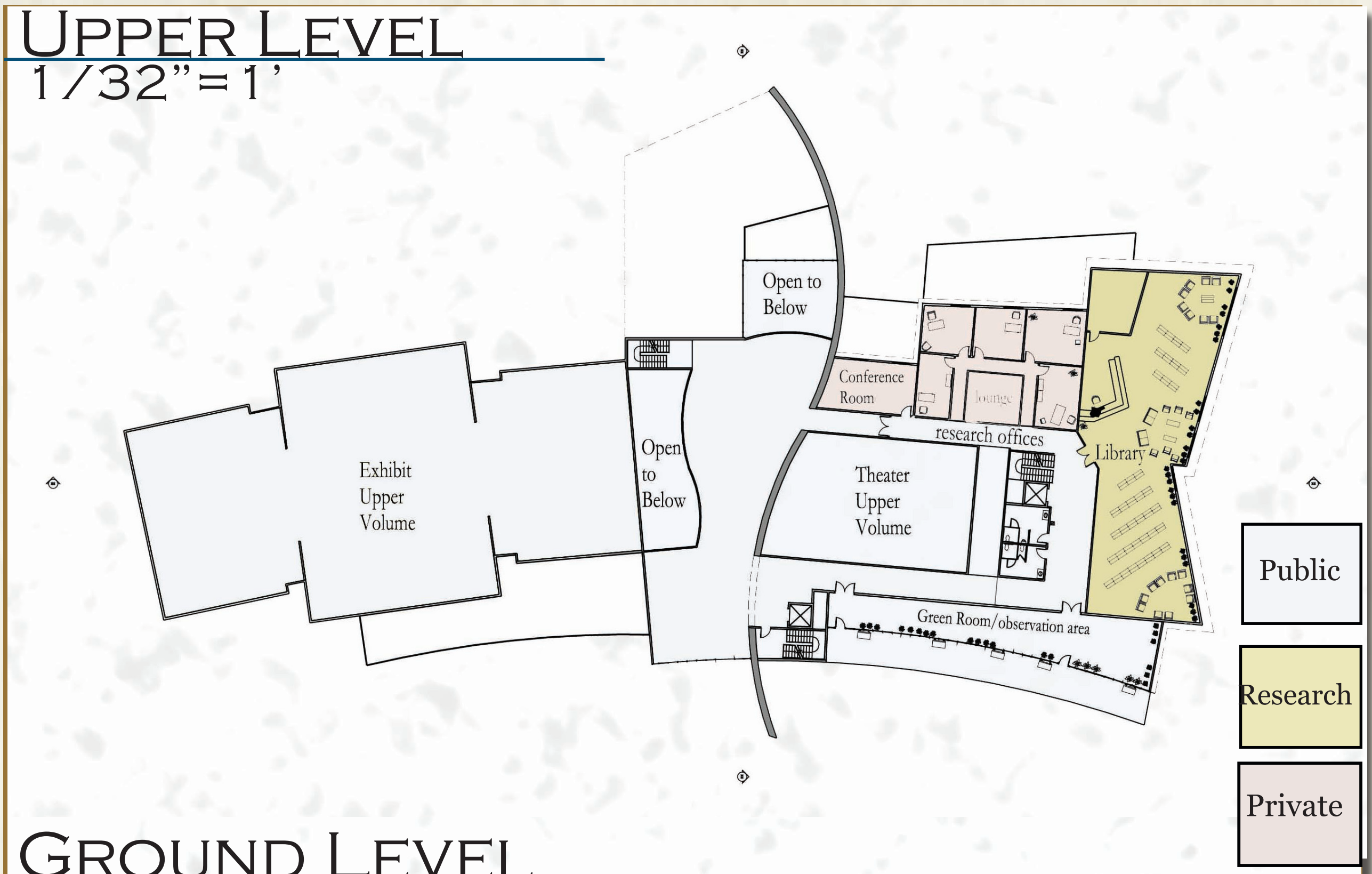
A site was chosen near New Ulm, Minnesota based on the powerful relationship between river and valley, surrounding natural environment and landscape. New Ulm has a strong cultural heritage unifying the history of the region.



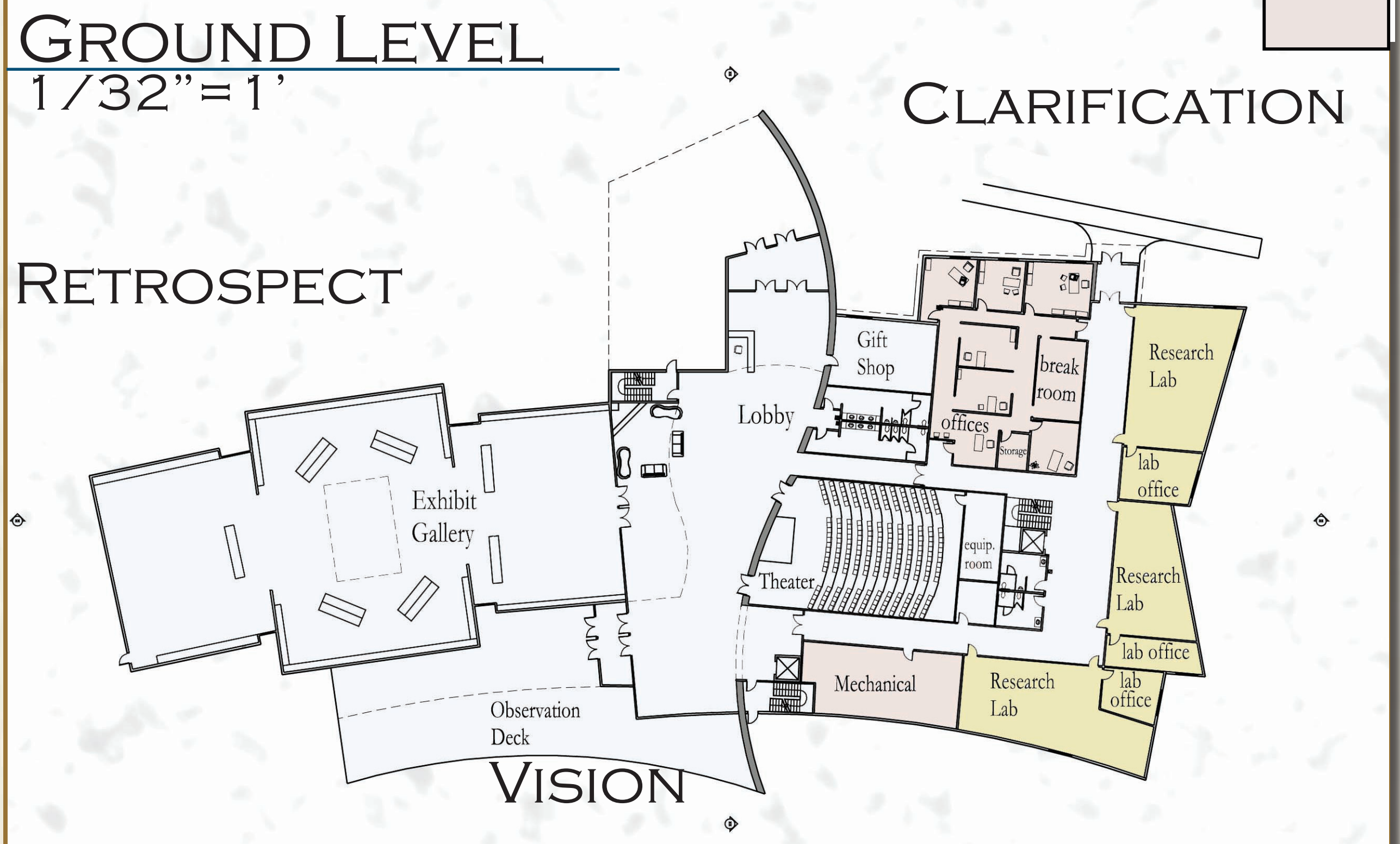
View of New Ulm from site



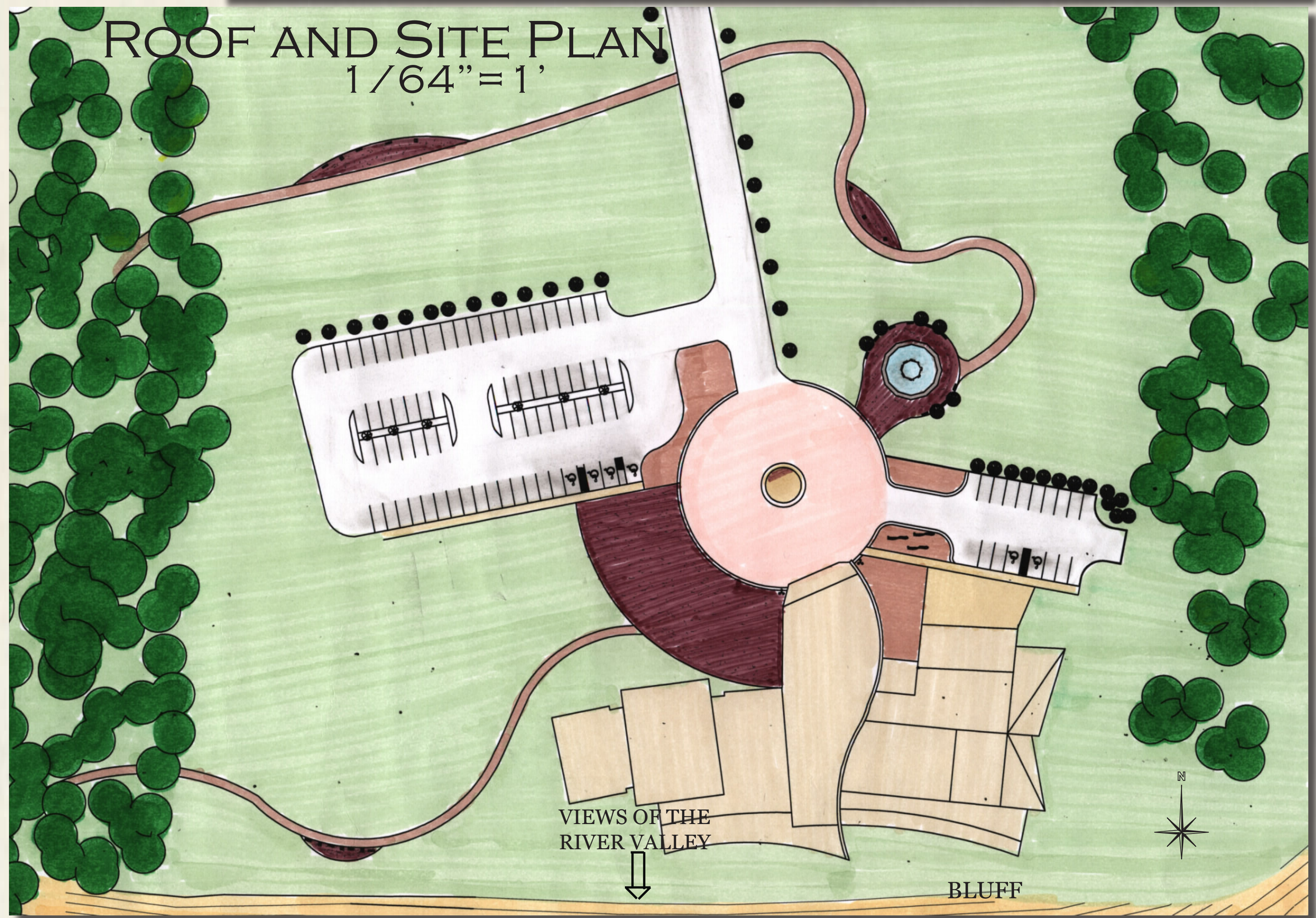
UPPER LEVEL 1/32" = 1'



GROUND LEVEL 1/32" = 1'



ROOF AND SITE PLAN 1/64" = 1'



View of Minnesota River



CONTEXT

The bluff site overlooks the valley and Minnesota River. Walking trails are designed to introduce visitors to natural features found within the valley context.

VALLEY RESEARCH AND

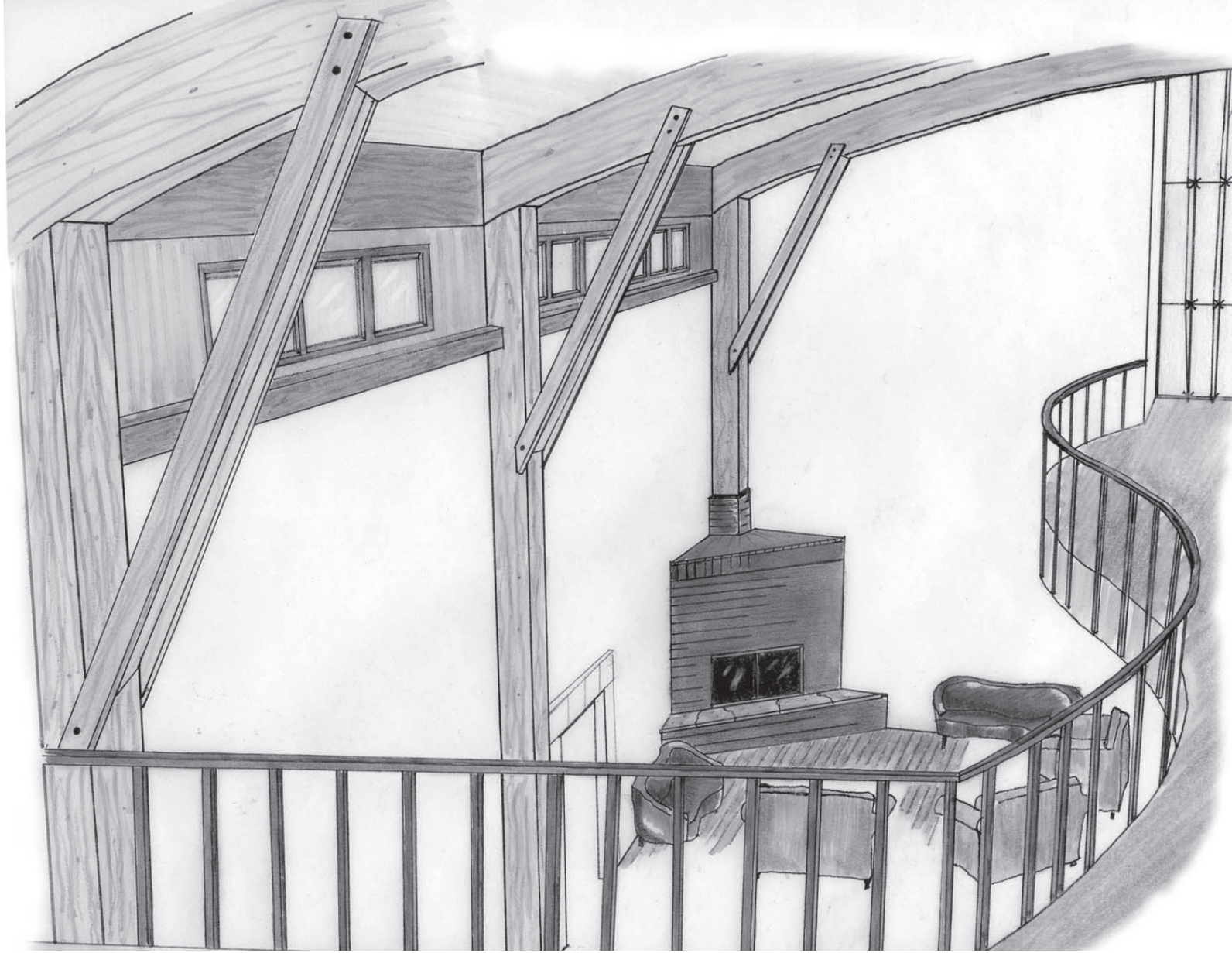
INSIGHT

The Library is characterized by sloping glu lam beams, running diagonally through the space, producing a feeling of energy and integrity. The library is used for obtaining information from written resources. Breakout spaces within the library are designed to allow for gathering and reflection of the material being presented. Views of the river and valley are part of the library experience.

LIBRARY



LOBBY



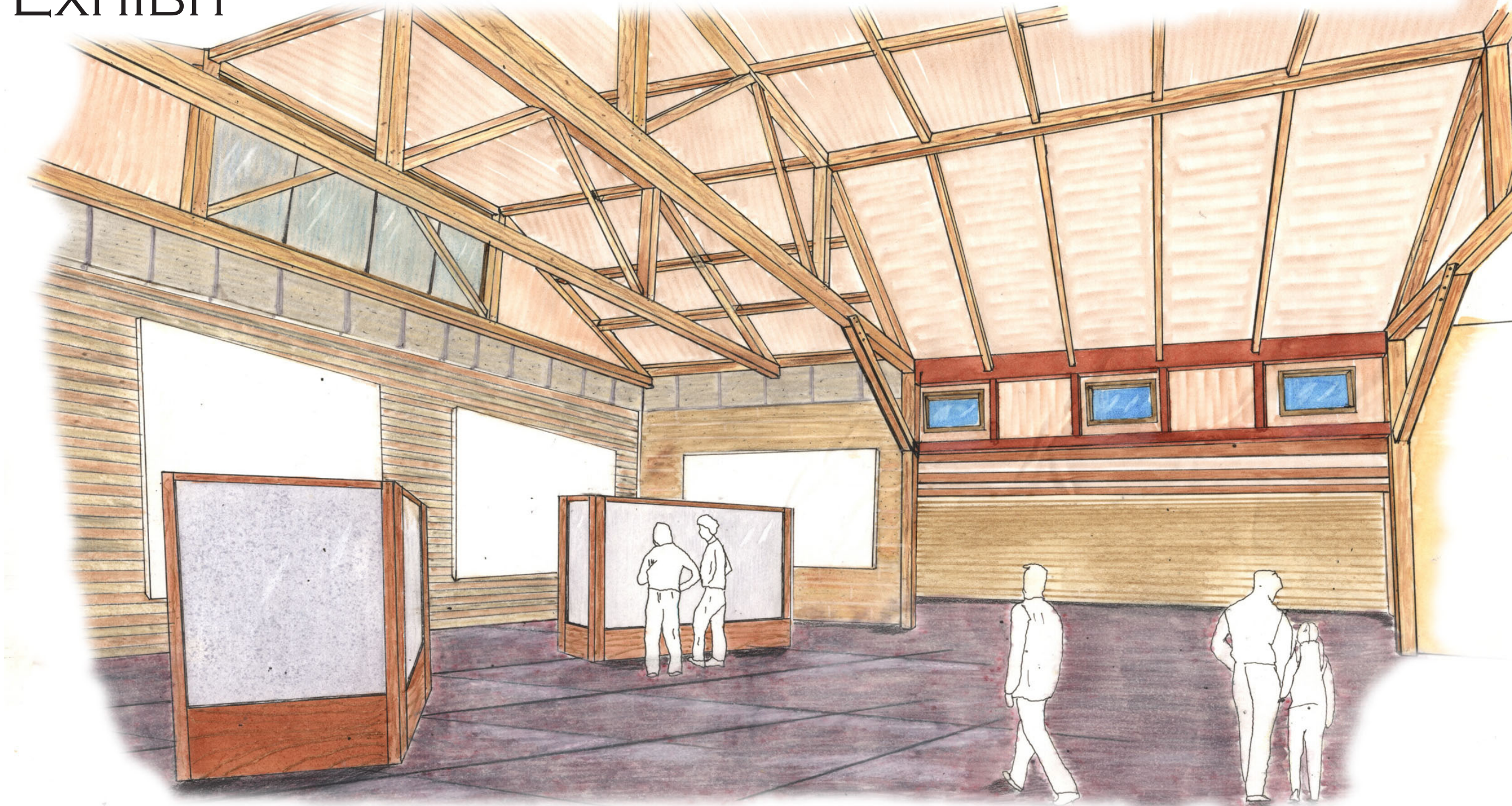
CONNECTIONS

The two story volume of space in the lobby links the upper level with the ground floor. Daylight from the clerestory windows is able to penetrate both levels. The fireplace and lounge area is a reminiscence of early ways of living in the area.

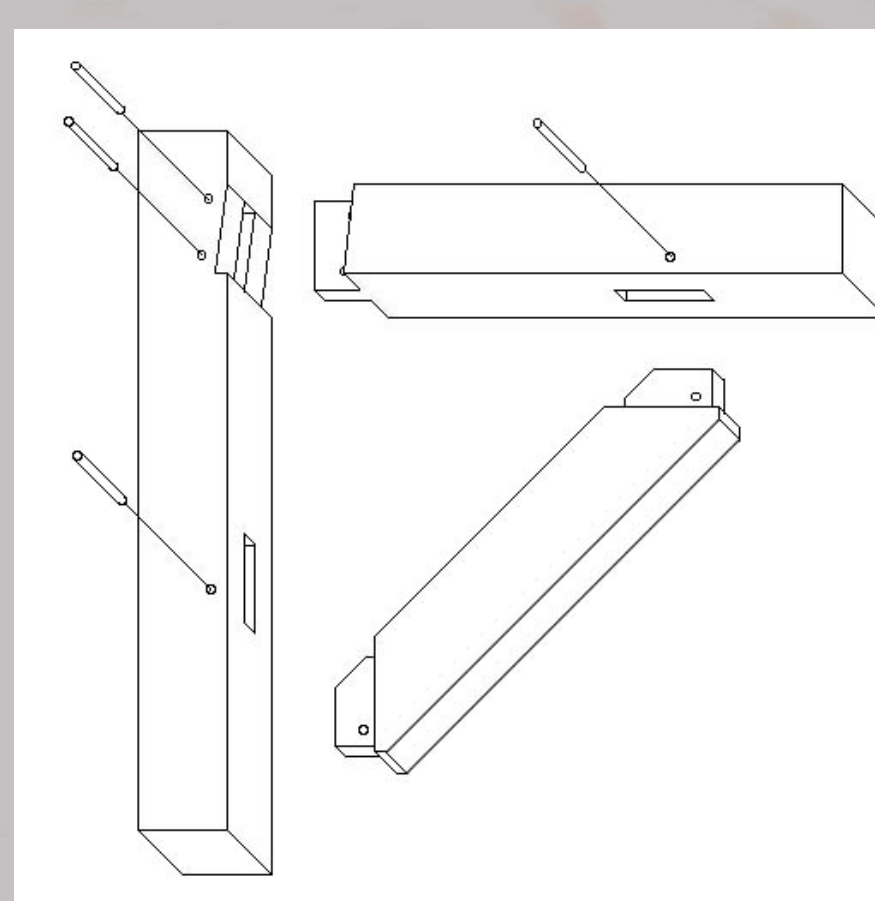
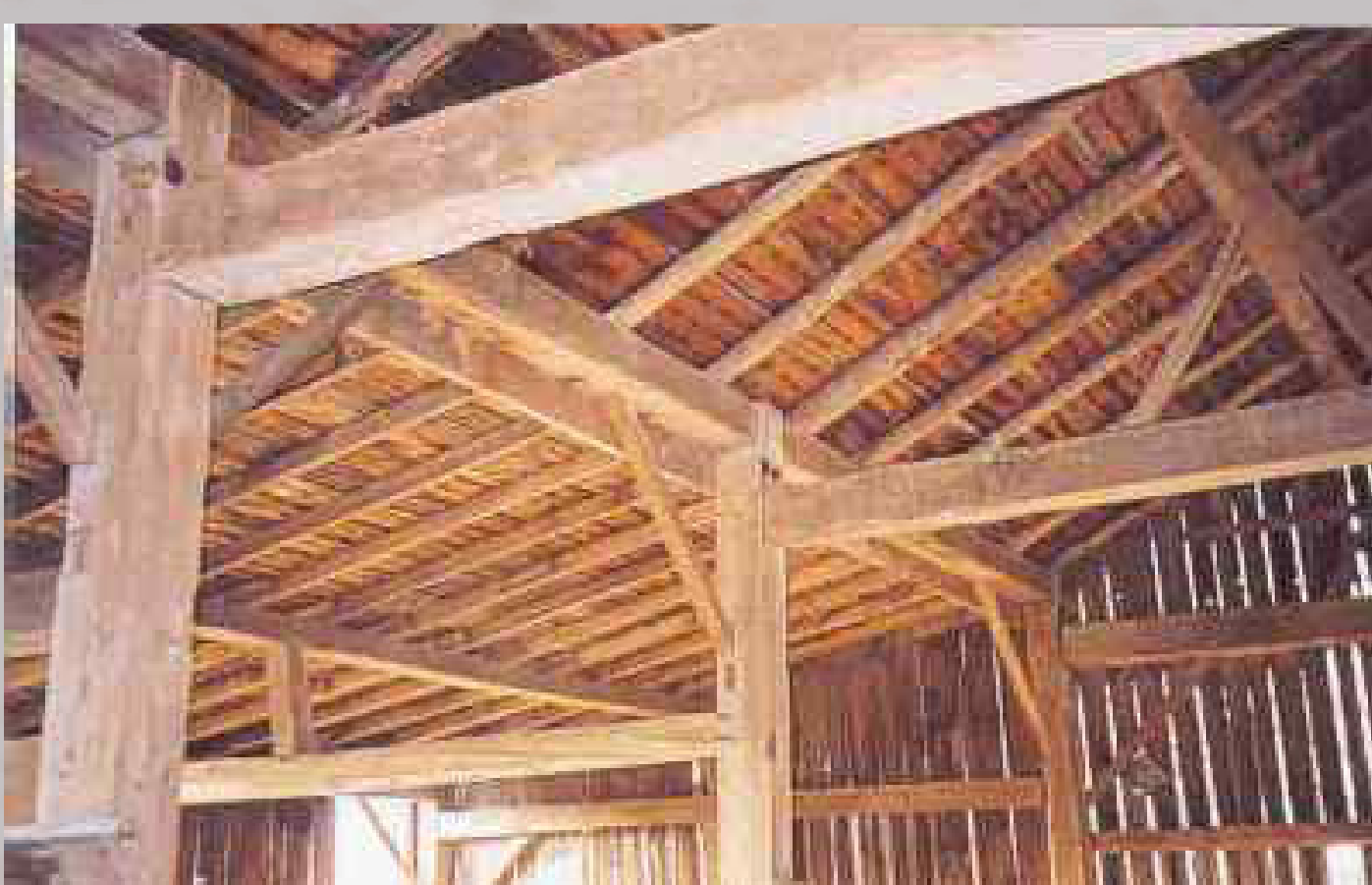
VISION

Windows above the galleries allow natural day lighting to enter, and filter through the timber trusses to the exhibit area below. Daylight entering from overhead and the timber frame bring natural elements to the interior spaces. The floor represents the reddish granite that forms the geological floor of the valley. Trusses create a sense of enclosure and transparency while moving through the exhibit area

EXHIBIT



INCITE



The building technique of heavy timber framing using mortise and tenon joints was brought to the area by the European settlers. The early settlers used the building method primarily for barn structures. The construction of the building was a community event, with a big social event when the structure was complete. These building techniques greatly add to the aesthetic and emotional value the architectural design.

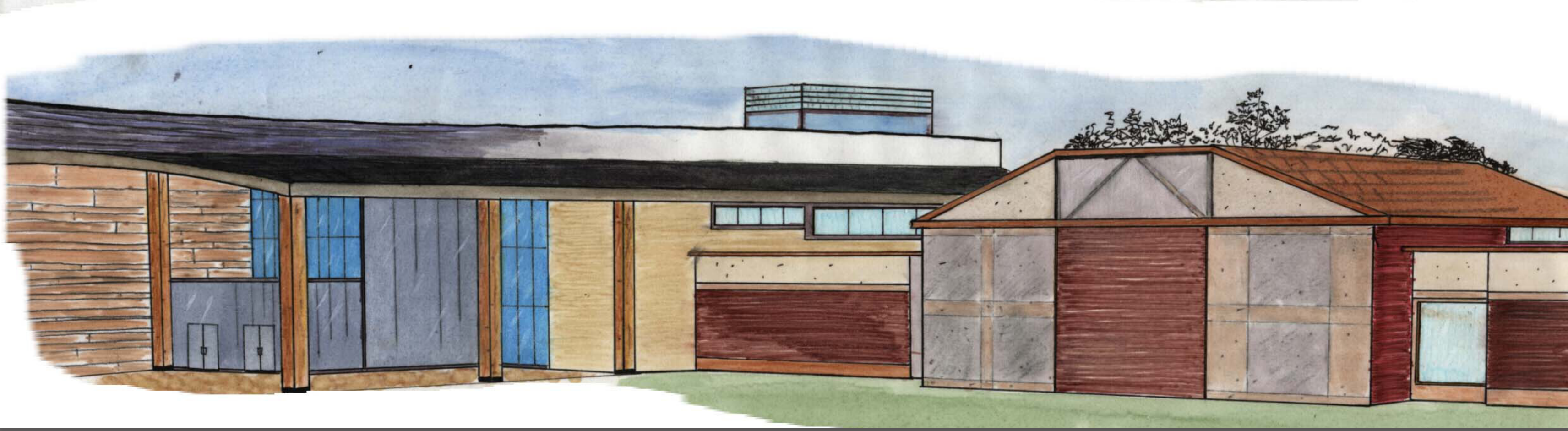
INTERPRETIVE

CENTER



PERCEPTION

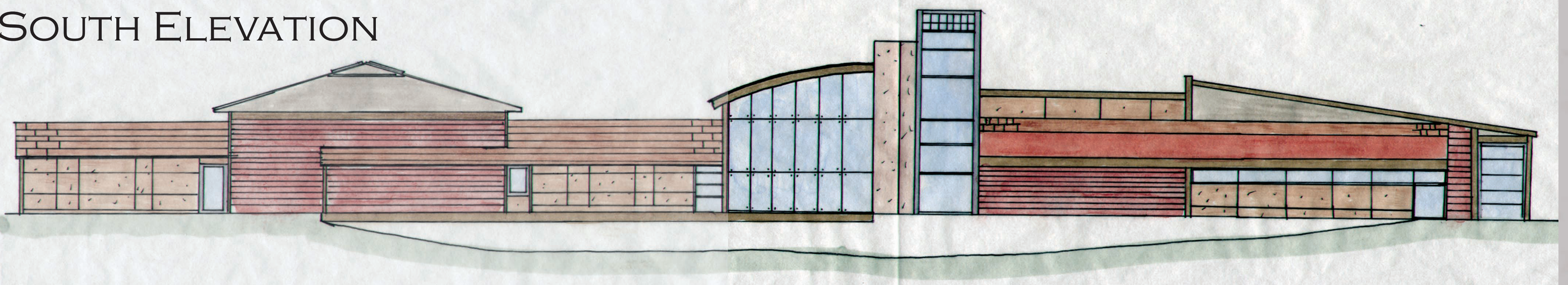
The exterior design maintains an integrity between the building and the natural valley environment. The center perceives to belong and be a part of the surrounding river valley.



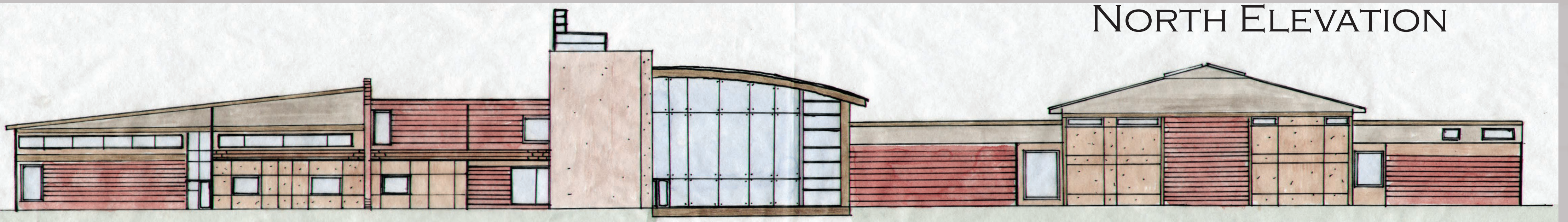
MATERIAL

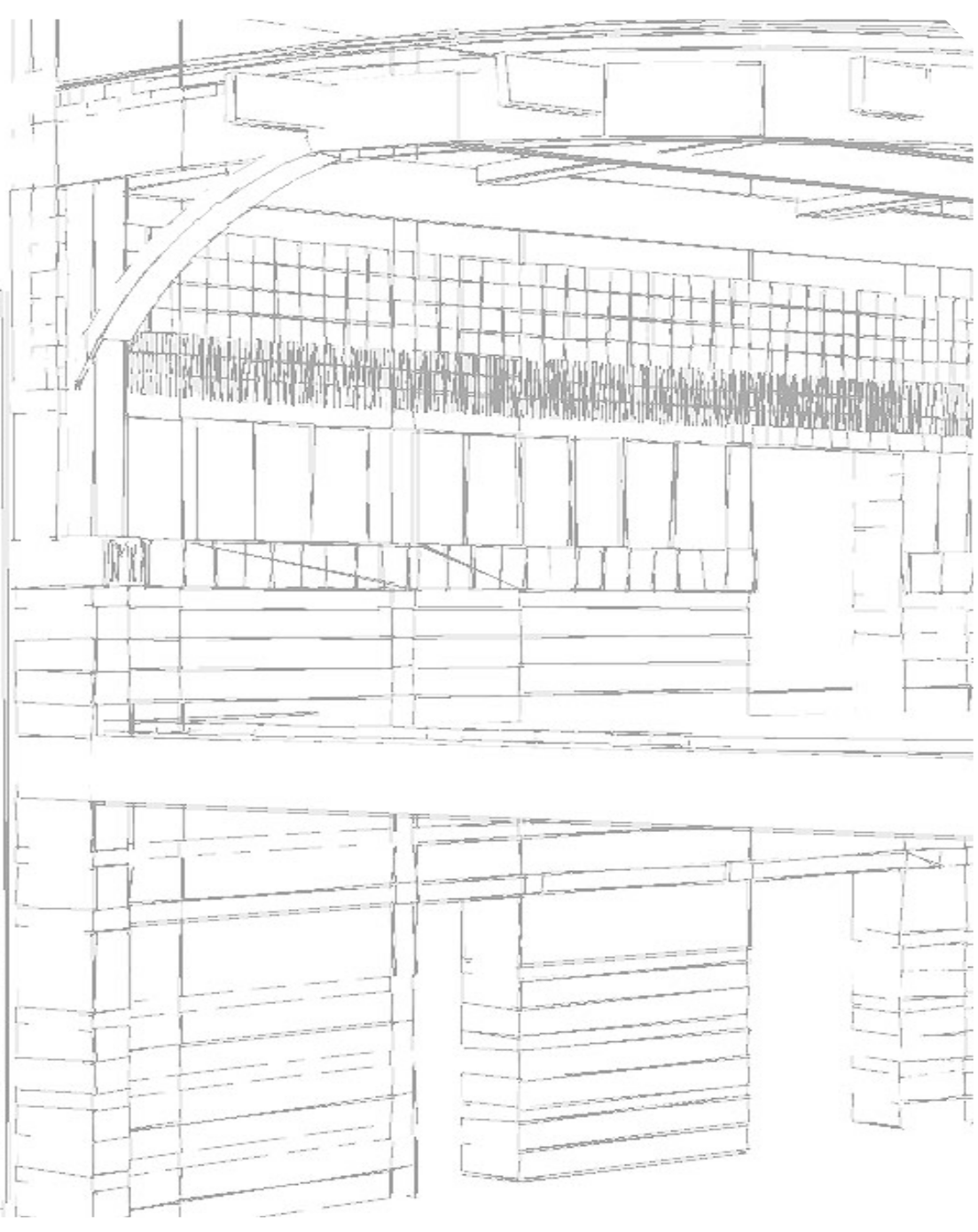
The elevation studies examine the use of varying masonry materials, combined with the transparent material of glass. The design intent was to express a unity between the various activity sets with the materials used on the exterior of the building. A combination of brick, stone and concrete block was used to form a balance throughout the exterior.

SOUTH ELEVATION



NORTH ELEVATION



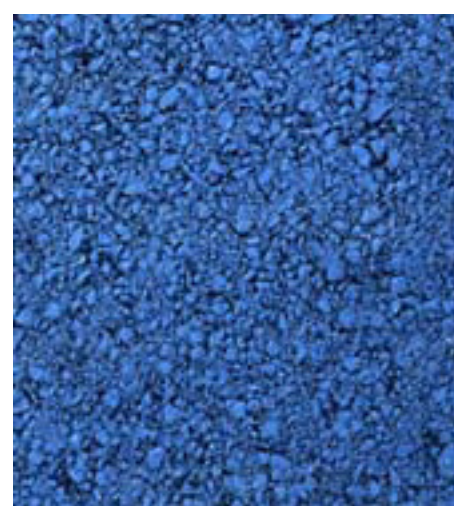


ORIENTATION/BACKBONE

Space is organized by a primary masonry “orientation wall” assembled based on materials and techniques familiar throughout the river valley. Layers of rock materials are easily accessible in the valley due to the scouring forces of the ancient glacial River Warren. Granite blocks at the base of this wall reflect the primary geological foundation of the valley. Limestone is found abundantly throughout the region. Geologically unique Kasota limestone is widely associated with the material identity of the Minnesota River Valley. American Artstone, produced in New Ulm, is a well-established manufacturer of high-quality architectural precast and cast stone building products. The blue stained concrete block represents the river flowing through the valley. Mortise and tenon timber framing is characteristic of many heritage buildings in the New Ulm region of the valley.



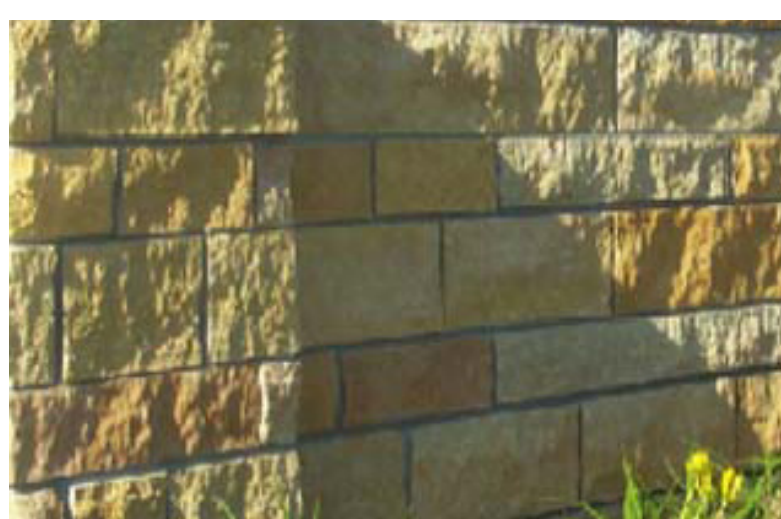
Mortise and Tenon Timber Frame



Blue Stained CMU



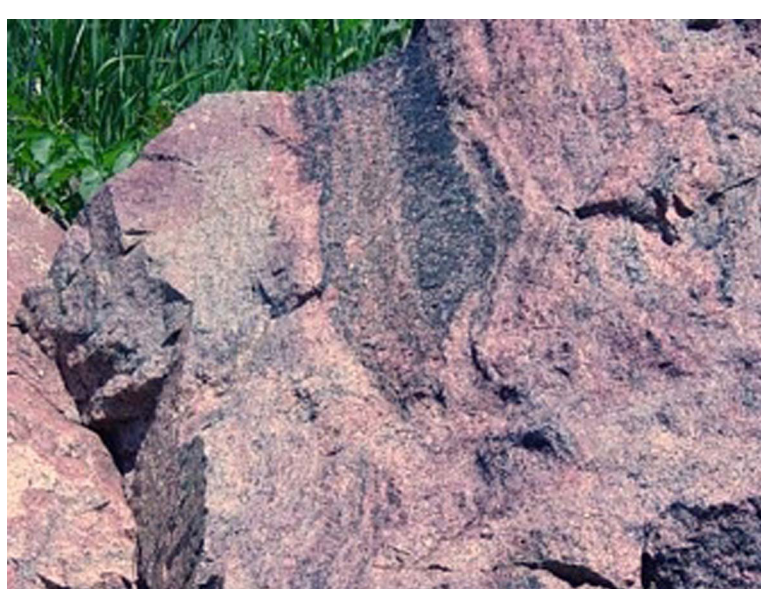
Artstone Cast Block



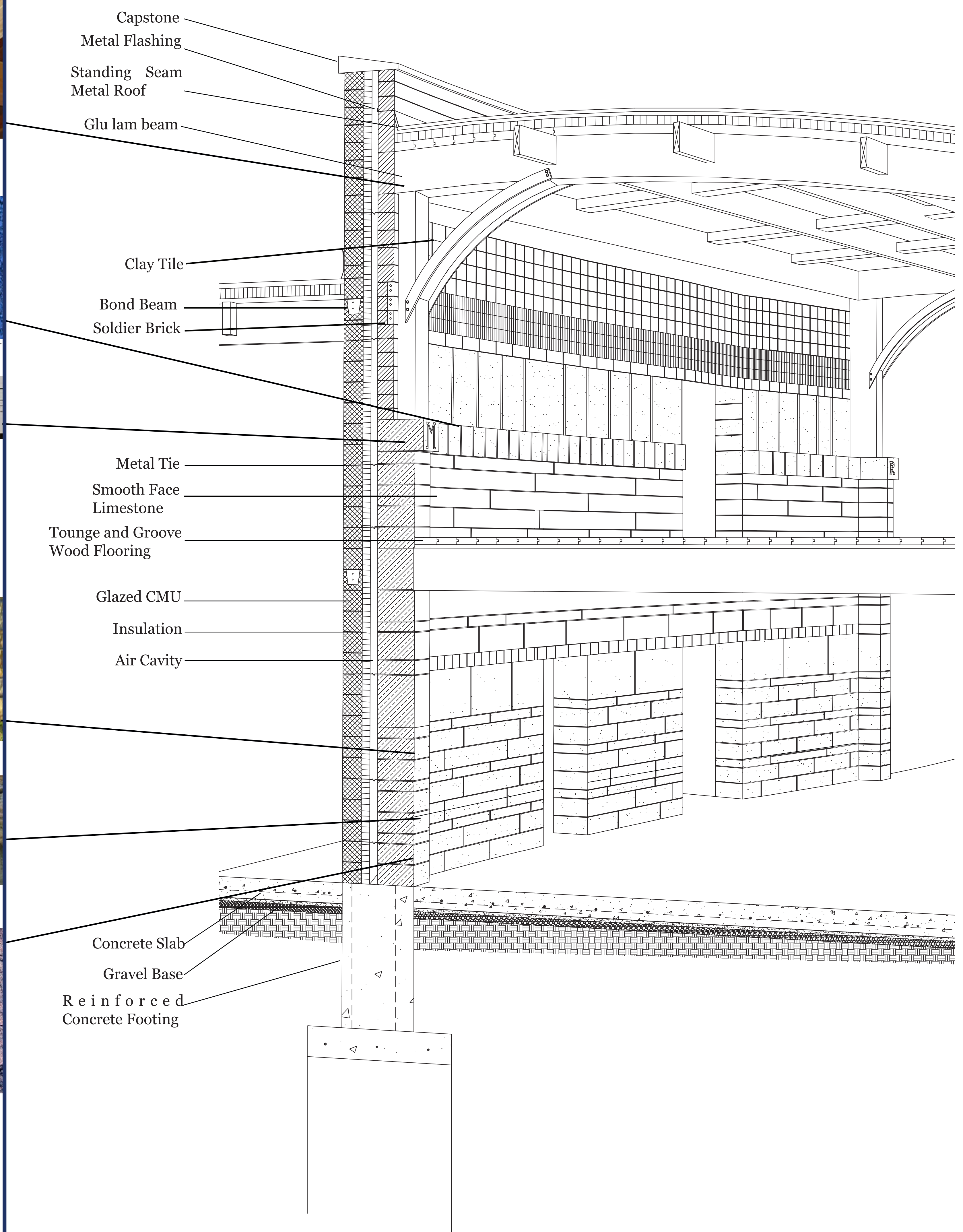
Kasota Limestone

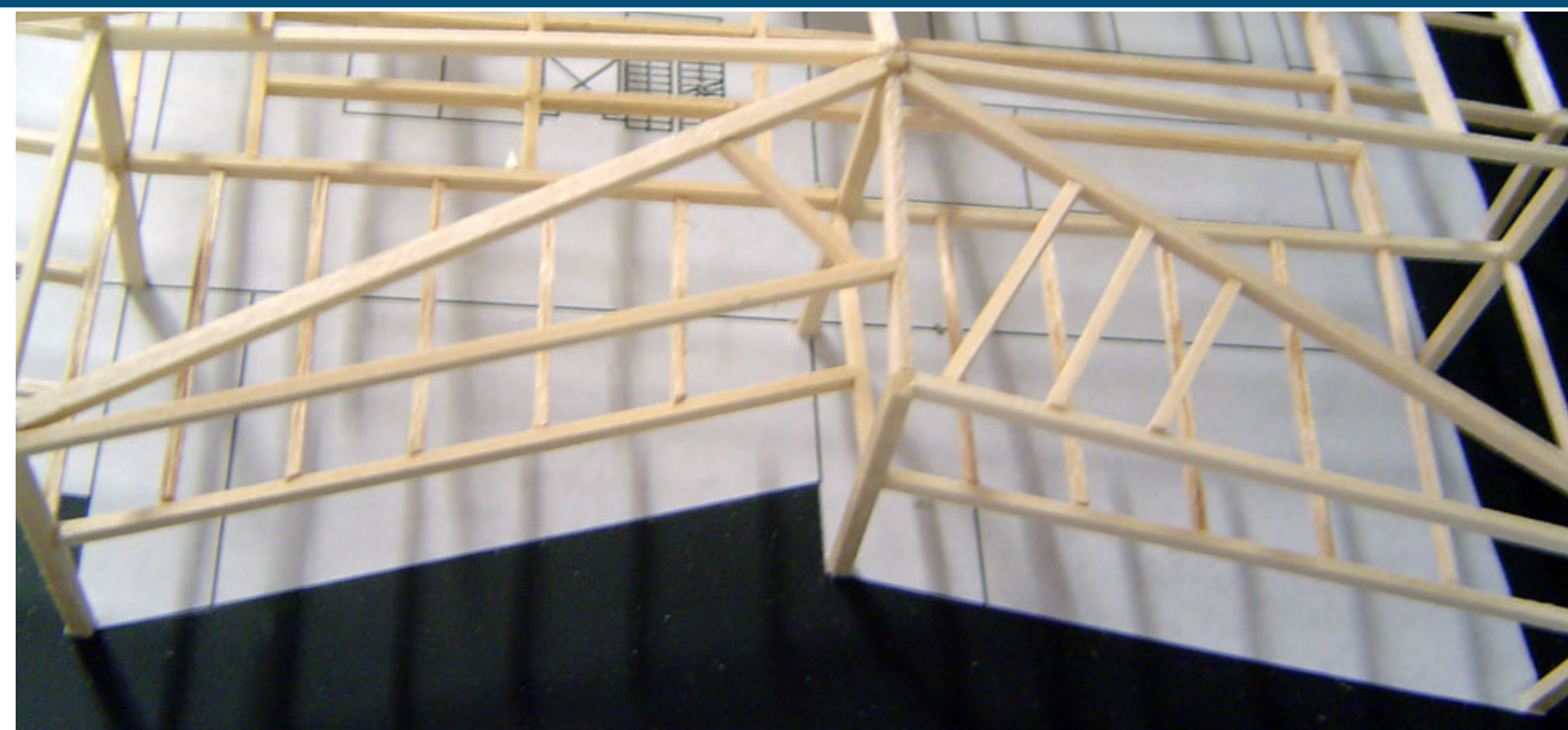
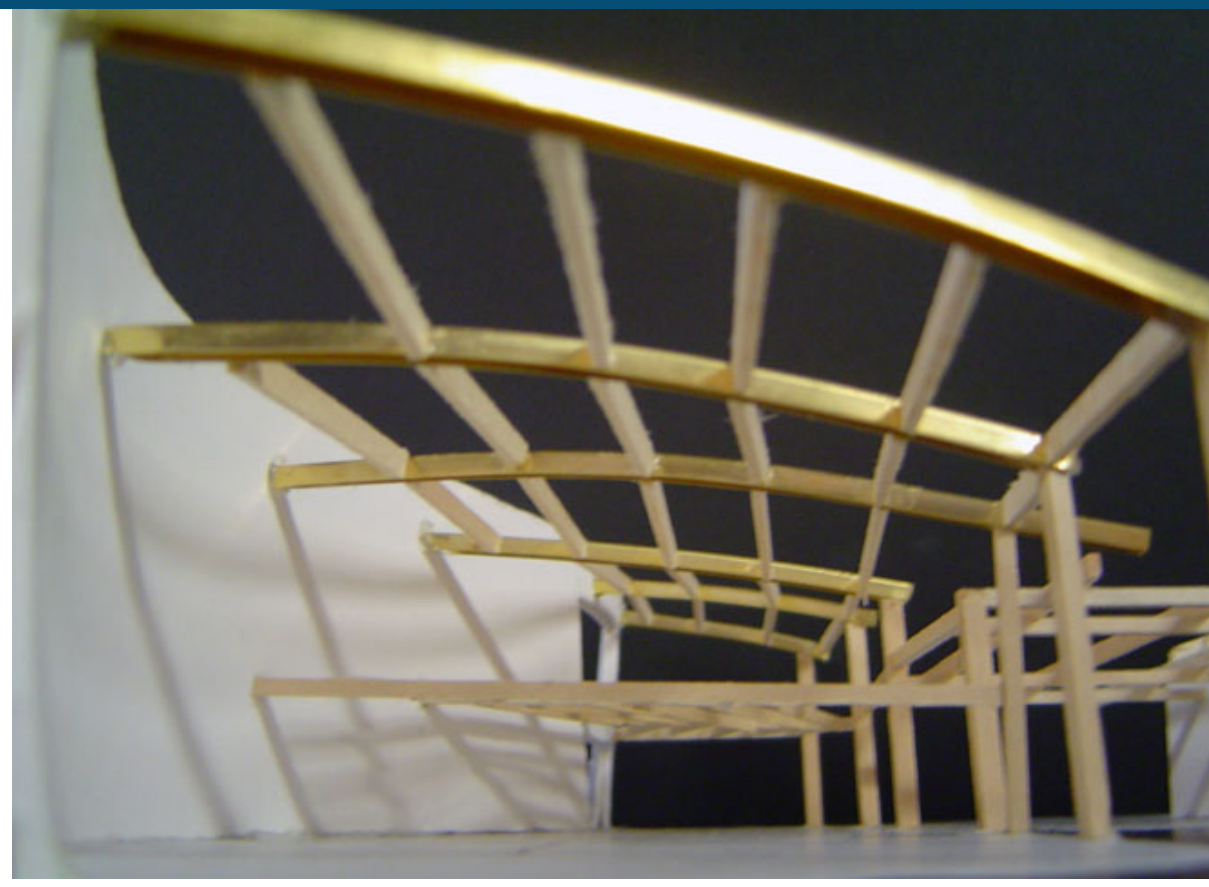
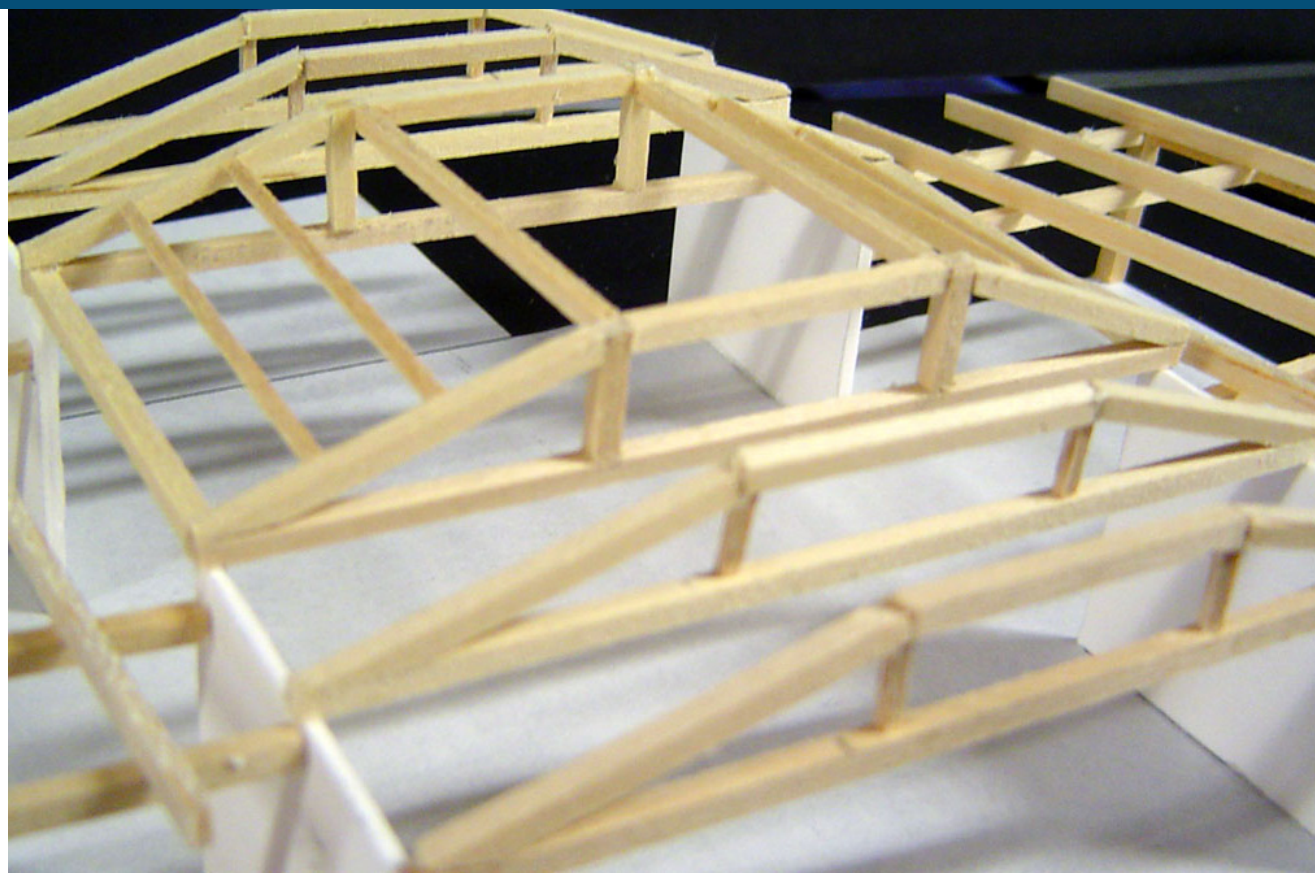


Platteville Limestone



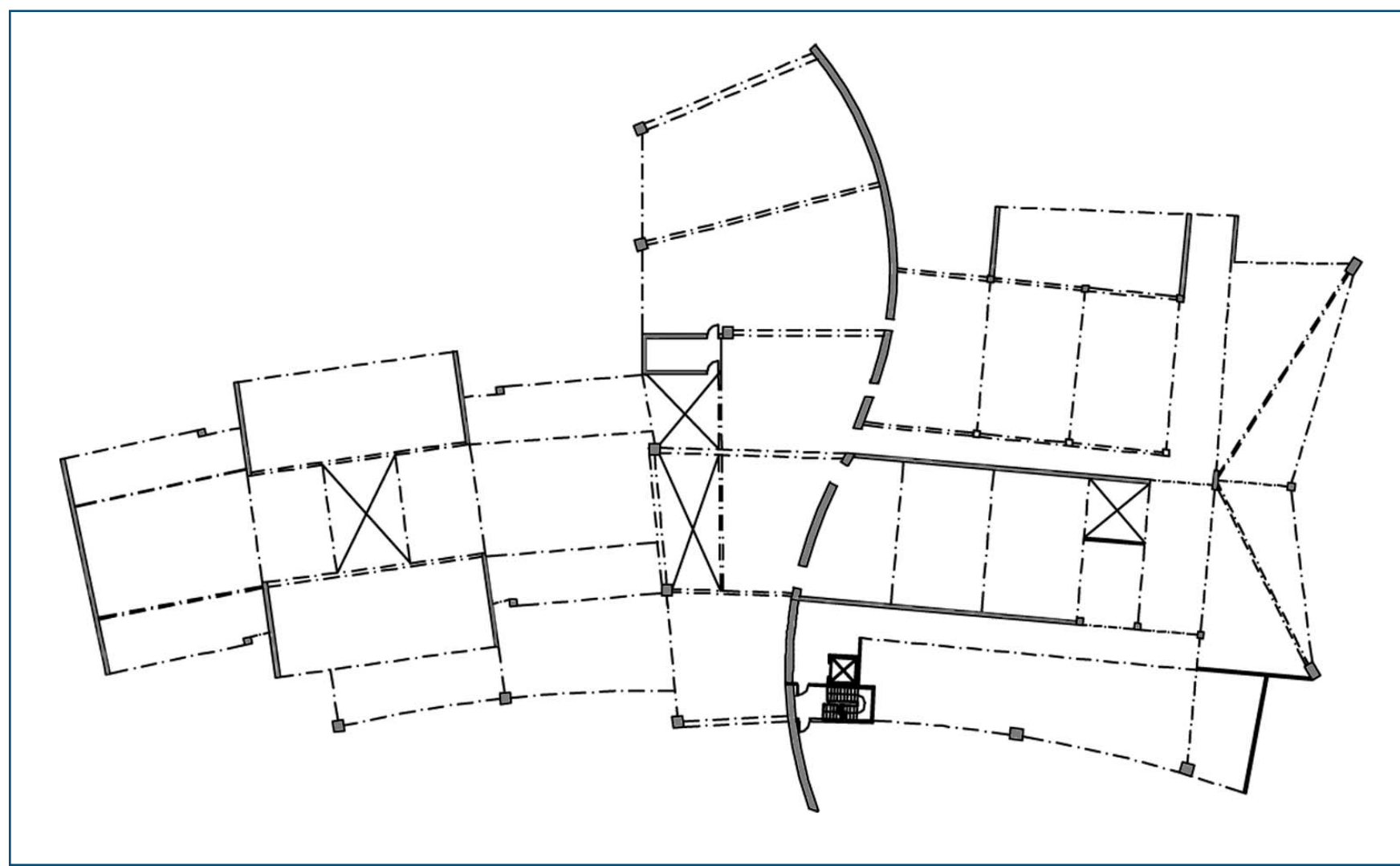
Granite





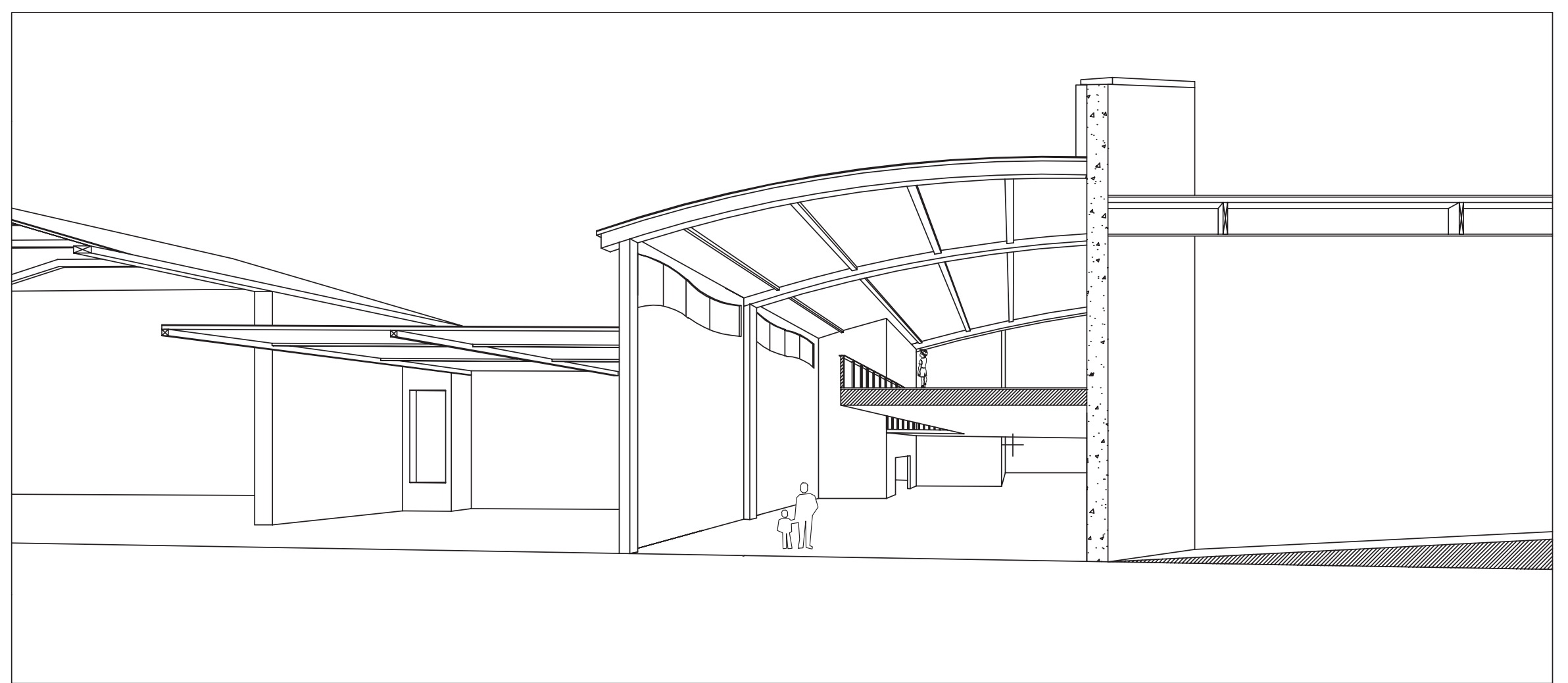
MECHANICAL SYSTEMS

The surrounding natural environment is incorporated into heating and cooling the building. Geothermal technology is used to extract natural heat from the Earth for heating, and disperse heat into the ground for cooling of the building.



LAYOUT

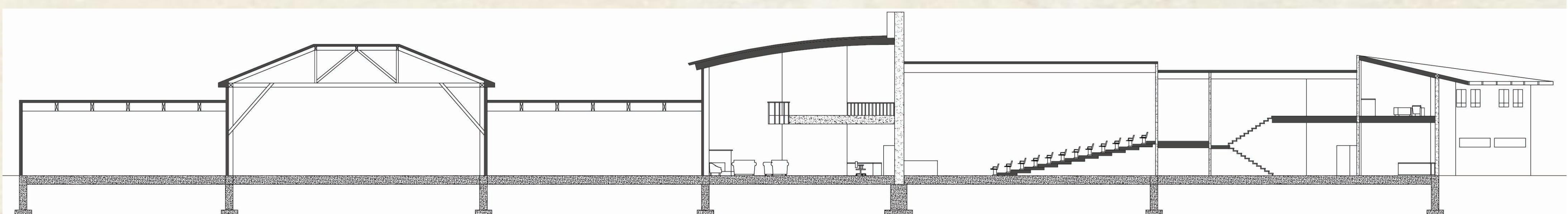
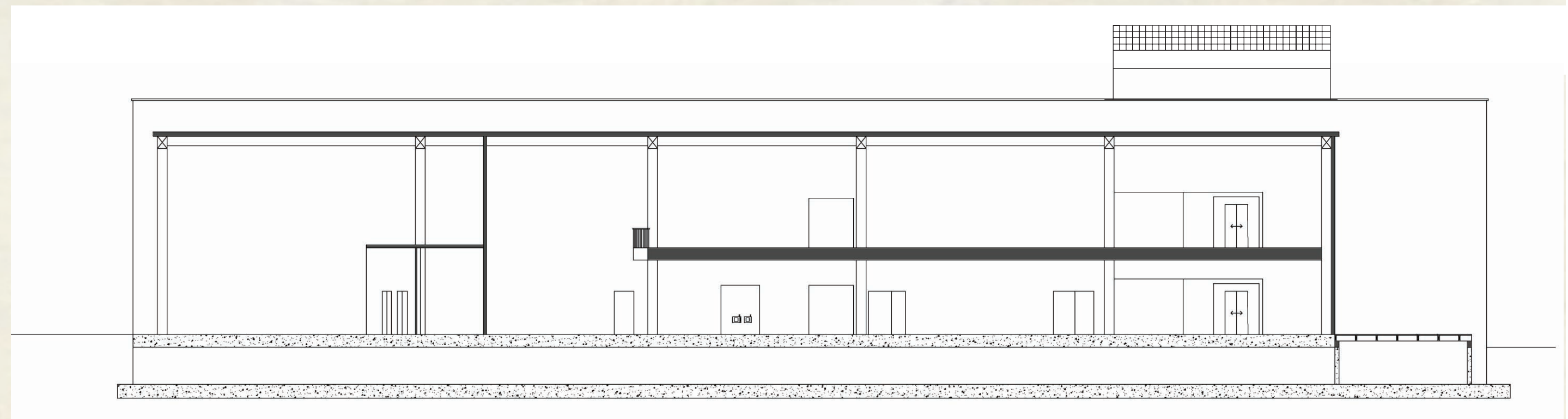
The structural system combines heavy, load bearing masonry walls with a lightweight skeletal structural system. Structural patterns enhance spatial characteristics and entice a flow of movement throughout the building.



BUILDING SECTIONS

1/16" = 1'

Altering vertical relationships throughout the building enhances the expression and emotion of each of the interior spaces.



“A RIVER’S LEGACY”



MEANING

The Research and Interpretive Center explores the implications of historical events on the region, and anticipates future meanings and growing awareness of a fragile ecosystem. The interpretive center communicates a range of meanings behind events that shaped the valley, geologically and culturally. Through architecture, visitors will be presented with historical knowledge, interpretations, and reflections about a unique and special river valley landscape setting, aiding in shared understanding of how to respect and care for the land as a source of sustenance and cultural meaning.



HERITAGE

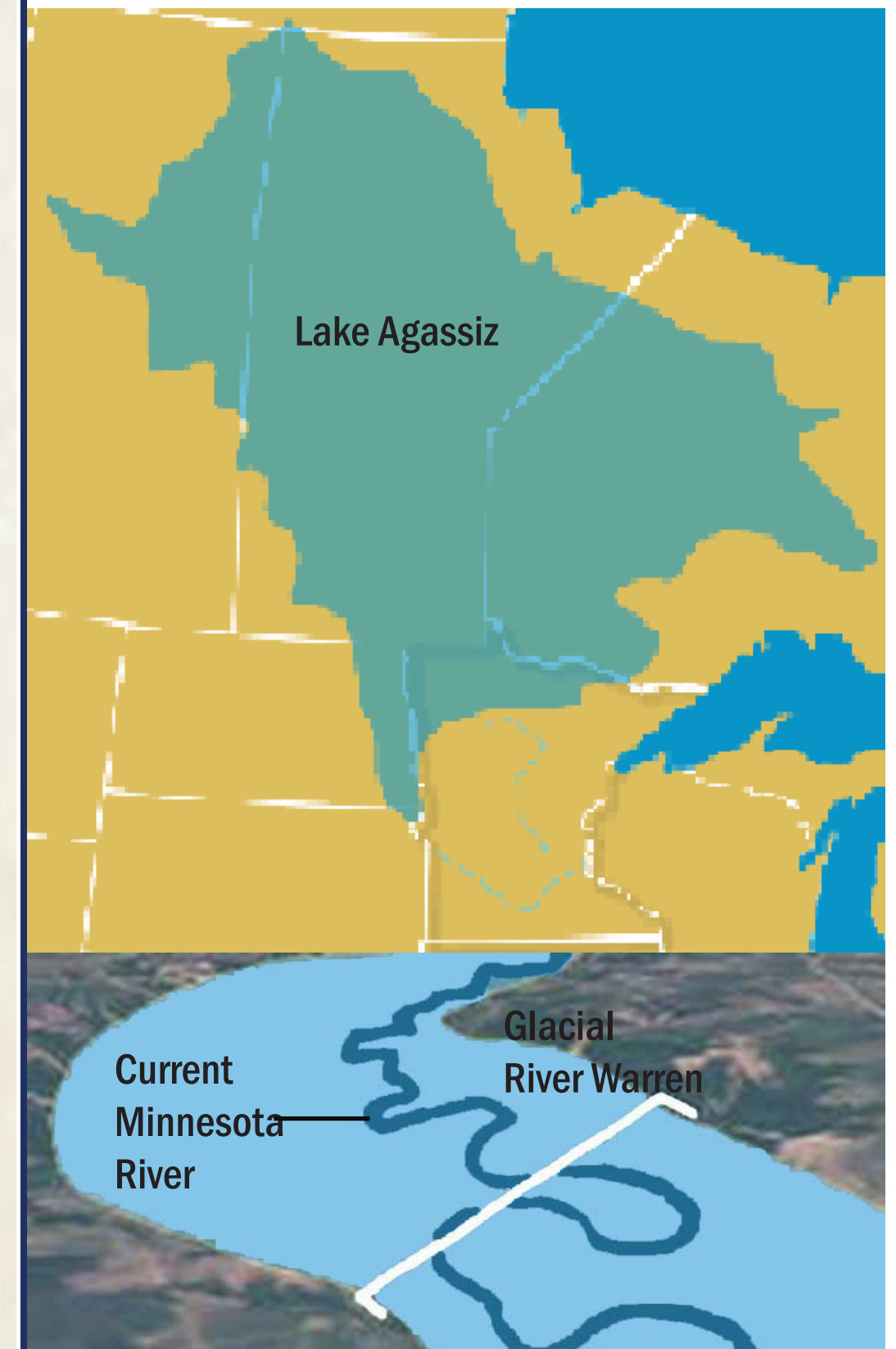
The Minnesota Valley was an important source and setting for indigenous, native American populations before they were displaced by European cultures, particularly German immigrants in the New Ulm region. Based on these imported traditions of masonry construction, German-American immigrants used the geological rock materials found in the region, bringing forth a strong emphasis on detail and ornamentation in masonry design.



RESOLUTION

The research facilities will enable the study of the river environment and ecosystems. The study will include cause and effect relationships regarding the forces acting on a river environment. The Minnesota River in particular is one of the top polluted waterways. The knowledge developed by the research will be beneficial for all river environments.

SHAPING THE VALLEY



Glacial River Warren drained the glacial Lake Agassiz, carving a recognizable footprint into the land.

The ancient river clawed deep into the earth exposing 3.8 billion year old granite rockbed, which is some of the oldest naturally exposed rock in the world.

Original inhabitants used the surrounding natural materials for medicine, nourishment, tools and shelter. The people respected the land for giving them everything they had.

Building techniques, usage of natural materials, heritage, and culture were brought to the valley by European settlers, and have been passed down through the generations.



GROWTH |

Through the process of this thesis design, I have grown in my awareness of examining relationships between natural environment and surrounding cultural heritage to guide an architectural design. To create an architectural product with design elements having a deep meaning relating back to the integrity of the land. (Minnesota River Valley). This thesis design process has enhanced my ability to effectively channel the communicated spirit, respect, and emotions toward a culture (of the Minnesota River Valley), and express them through the architectural design and building elements.