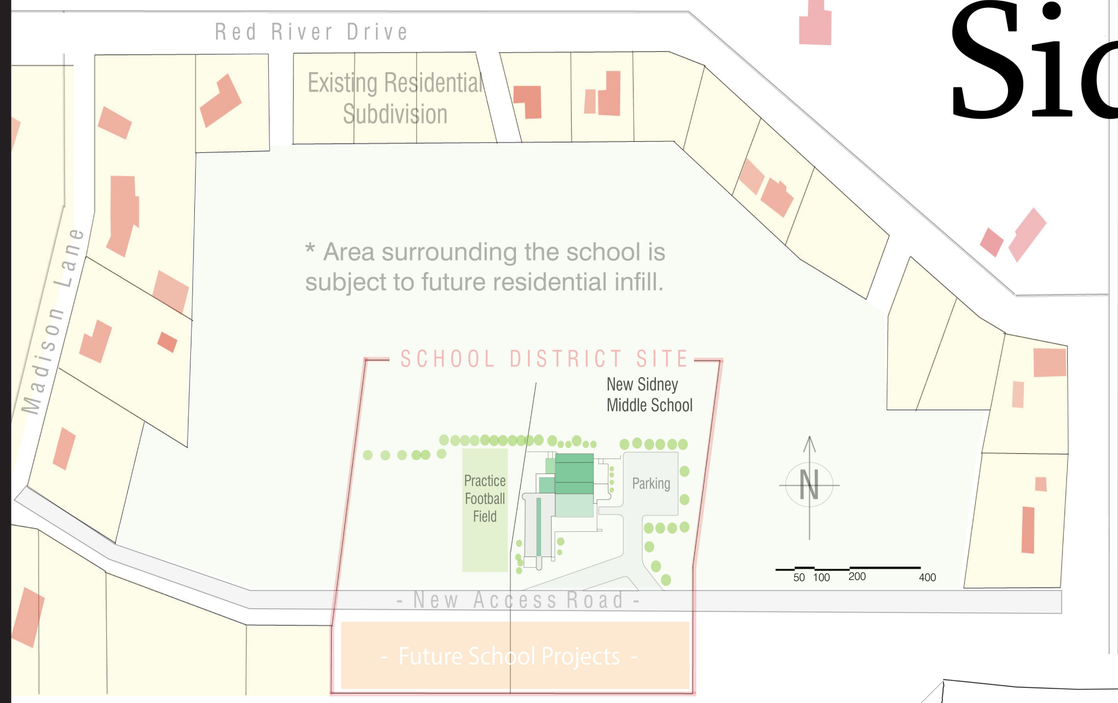
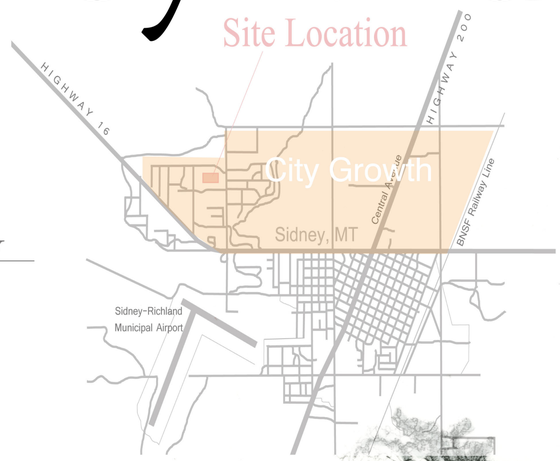
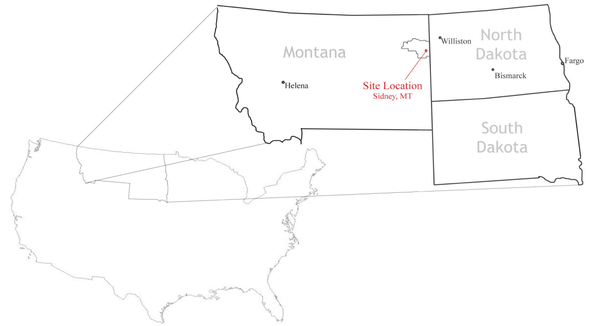
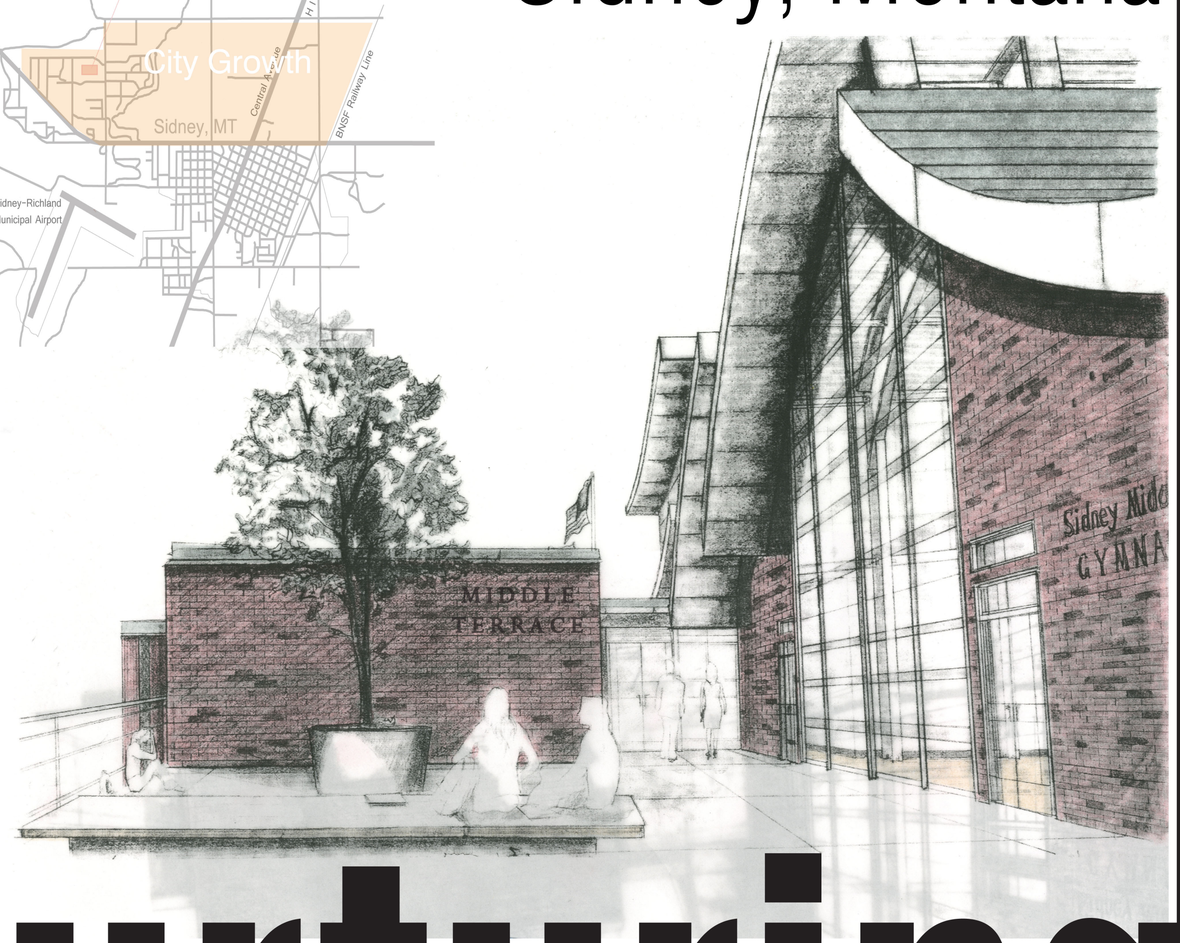
Sidney Middle School

Sidney, Montana









PROJECT CONTEXT

Located near the western edge of the Bakken oil formation, the town of Sidney, MT is presently experiencing exponential growth and development from increased oil production. The area's school district is severely stressed and there is need for new school projects, particularly a new middle school to meet an enrollment fluctuation of 300-600 students, divided between grades 6-8. This thesis is based on a real project, and uses the exact site prescribed by the Sidney School District, located at the northwest corner of town.

PROBLEM STATEMENT

"How can the design of a middle school enable the education of adolescents in sustainability and adaptation, and enable the growth of a city?"

THEORETICAL PREMISE

The learning environment needs to nurture a positive perception of growth and sustenance to students.

CONCLUSIONS

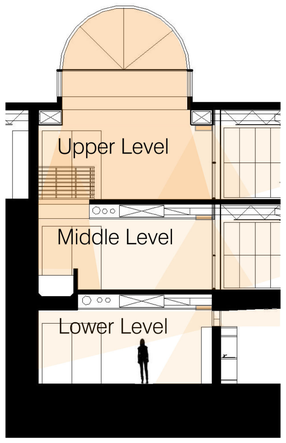
While formative for personal and educational growth, the school environment is also formative for responsible habits. For this middle school, such habits are embedded as subtle, simple things that are meant to help curb a student's perception of their immediate environment (for example, a student/teacher finds it easier to open an operable window to cool a room instead of activating an active system, or take the numerous broad stairways at the ends of the building to traverse the floors instead of taking the single elevator.) The building layout consists of three floors that are divided on three distinct terraces to help it adjust to the site's natural westward climb in elevation.

A number of features were implemented to minimize the project's environmental footprint, including extensive daylighting enhanced by light shelf installations, cycled rainwater and snow meltwater collected by roof systems, operable windows, a circulating water feature for humidity comfort, and, perhaps most obviously, a physical building footprint that is maxed-out for an enrollment peak, yet fairly compact and not of a sprawling nature to help lessen intrusion on the site.

Spaces within the building are designed to be adaptable (specifically, enlarged or diminished) to respond to variable classroom scale, as well as the drastic enrollment fluctuation that can be expected for an area subject to boom/bust cycles in energy development, such as Sidney, MT. Sidney Middle School is designed to serve an enrollment range between 300 and 600 students, with 25 to 50 faculty and support staff.

The new Sidney Middle School is designed for the use of localized materials and construction practices. The design is meant to be easily identifiable as a school building, with a familiar material and color palette.

Corridor Illumination



Nurturing

N/S Section

1/8" = 1' - 0"