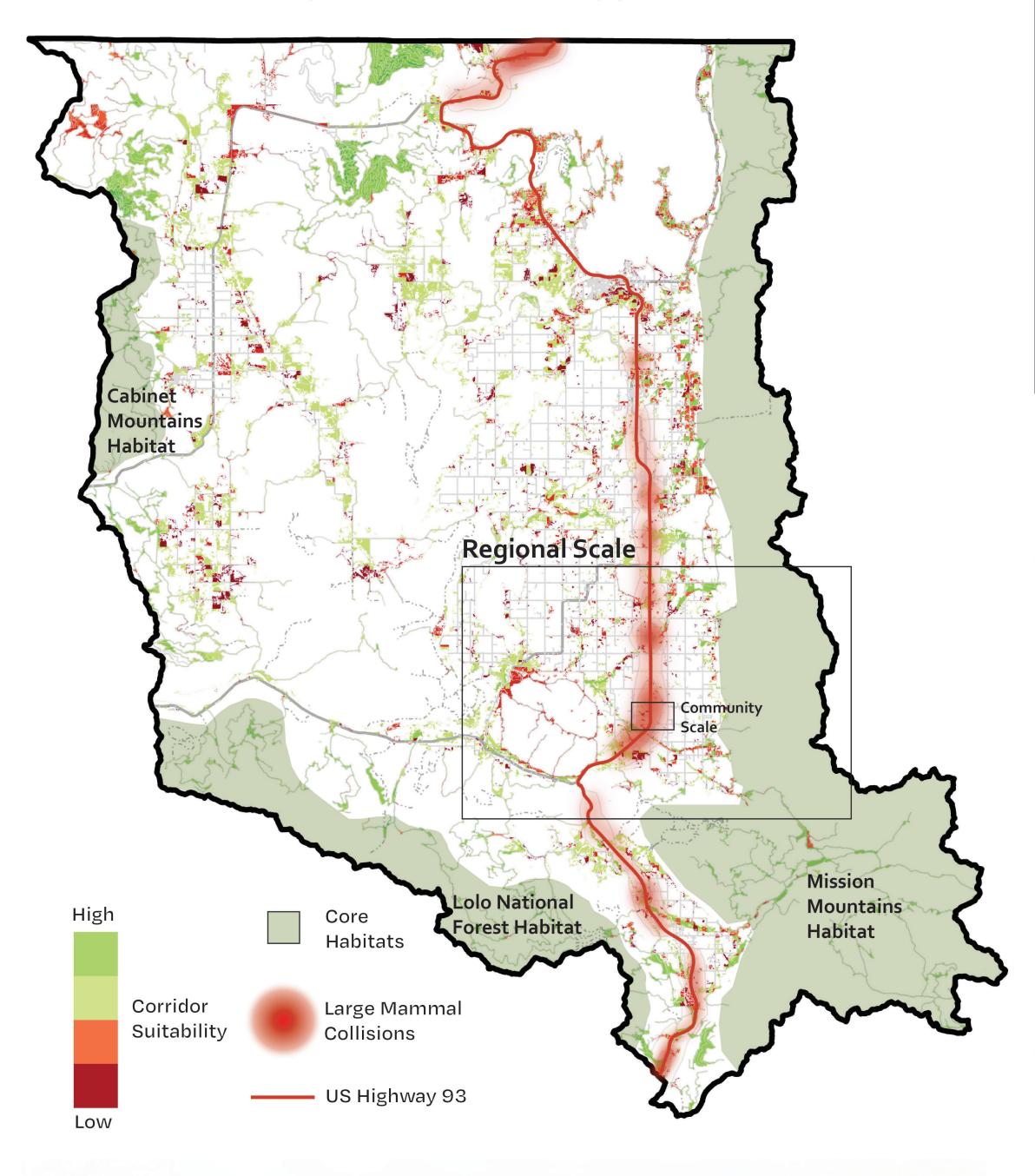


### A Fragmented Valley

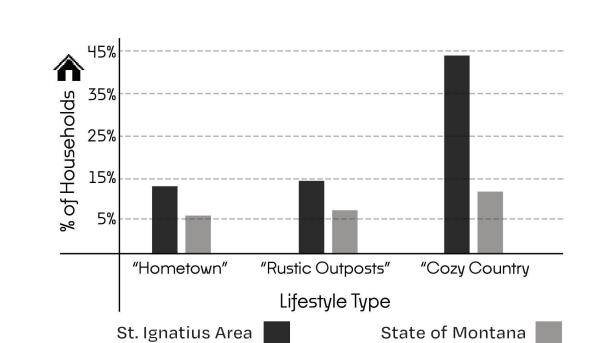
The Mission Valley is a region located in western Montana, on the Flathead Reservation. Historically, it was home to a variety of wildlife species, including elk, bison, and grizzly bears, among others. However, years of property re-allotment, land dividing, and agriculture have created a fragmented landscape that poses significant challenges for wildlife movement and migration.

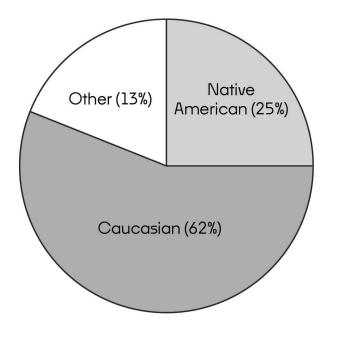
Wildlife corridors are essential for maintaining healthy ecosystems and promoting biodiversity. When wildlife can move around freely, they can access new food sources, find mates, and establish new territories. However, fragmented habitats can lead to isolation, genetic inbreeding, and decreased survival rates, which can ultimately threaten the long-term survival of species. Therefore, it is crucial to establish wildlife corridors that allow animals to move around the Mission Valley and other fragmented landscapes, connecting habitats and promoting genetic diversity.



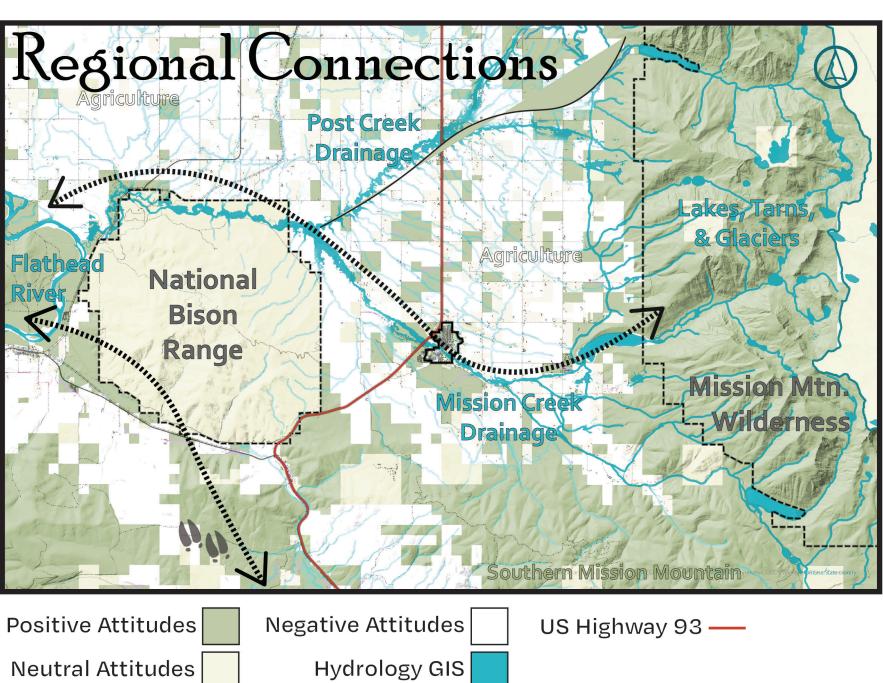


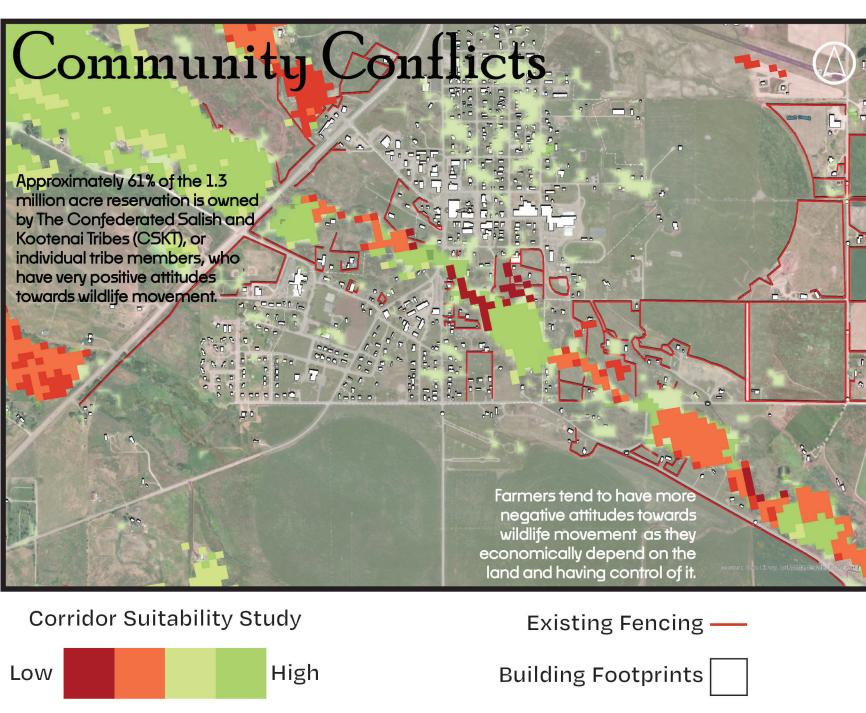
#### Community Profile

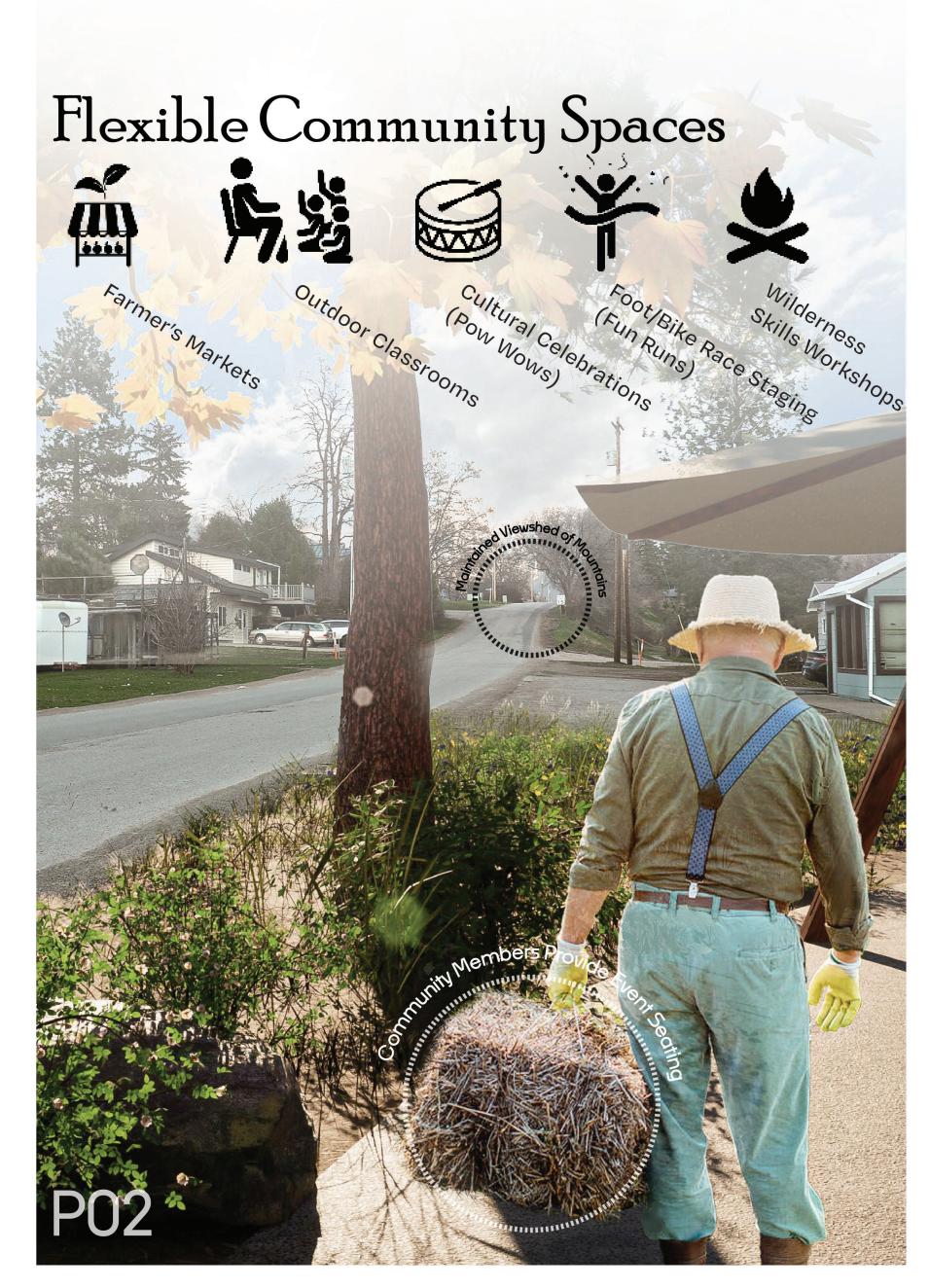




The Flathead Reservation is a melting pot of people of many backgrounds who all share one thing in common: They all fell in love with the beauty of the Mission Valley and stayed. This was true with fur traders who assimilated into the culture, and remains true today.







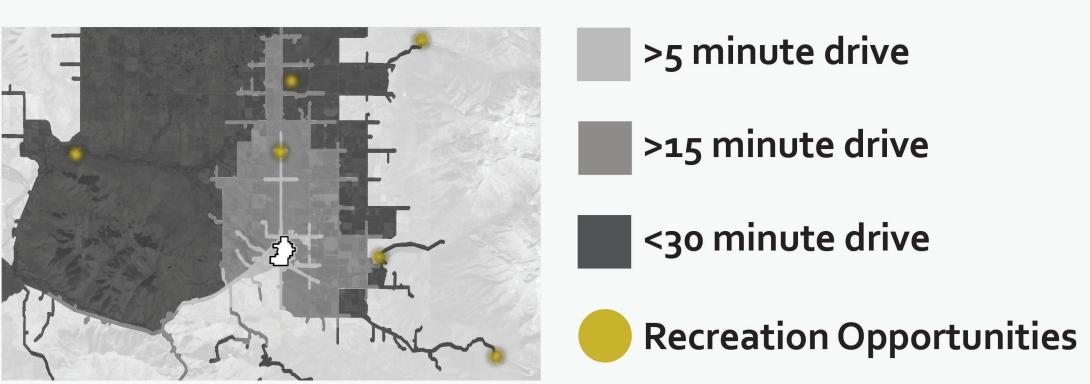


# Terraced Stormwater Treatment [501] Scale: 3/16" = 1'0" 501 Native Soil

# Project Site Analysis

The site analysis for this project involved examining local recreation opportunities in the St. Ignatius area and identifying public attitudes and beliefs towards wildlife movement in the area. This information was used to inform the design of the wildlife corridor and ensure that it was both effective in preserving the ecosystem and well-received by the community. It was found that St. Ignatius lacks well-maintained opportunities to experience the landscape. Most residents drive over 30 minutes to larger cities (Polson & Missoula) or 2+ hours to Glacier National Park to experience Montana's beauty. It was also found that property owners are generally supportive of wildlife movement interventions. Overall, farmers and ranchers have negative opinions of wildlife movement due to their financial dependance on the land.

## Local Recreation Opportunities



## Site Plan Key North Entrance Plaza

- A Parallel Parking
- B Cedar Grove + Constructed Wetland
- Teepee Inspired Canopy Tents
- Natural Wood Stairs
- Informal Corridor Entrance
- **F** Communal Firepits
- G Small Group Log Seating
- Mixed Evergreen Buffer

#### **South Entrance**

- Trailhead Gate
- Boulder Retaining Wall (2-6' H)
- K ADA Ramp
- Start of 5' Sidewalk (typ.)
- M Start of 8' Cantelever Path
- N Aspen Grove (Populus tremula)



Perspective Callouts





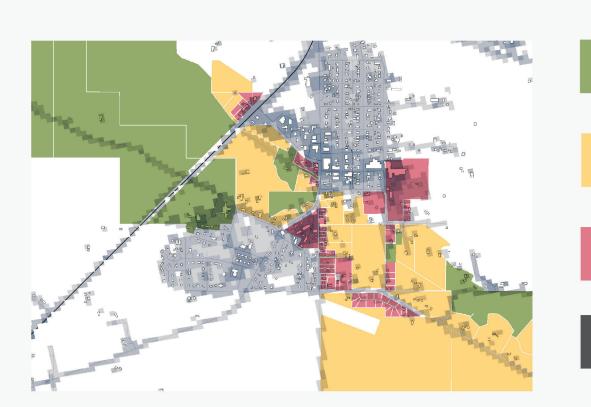




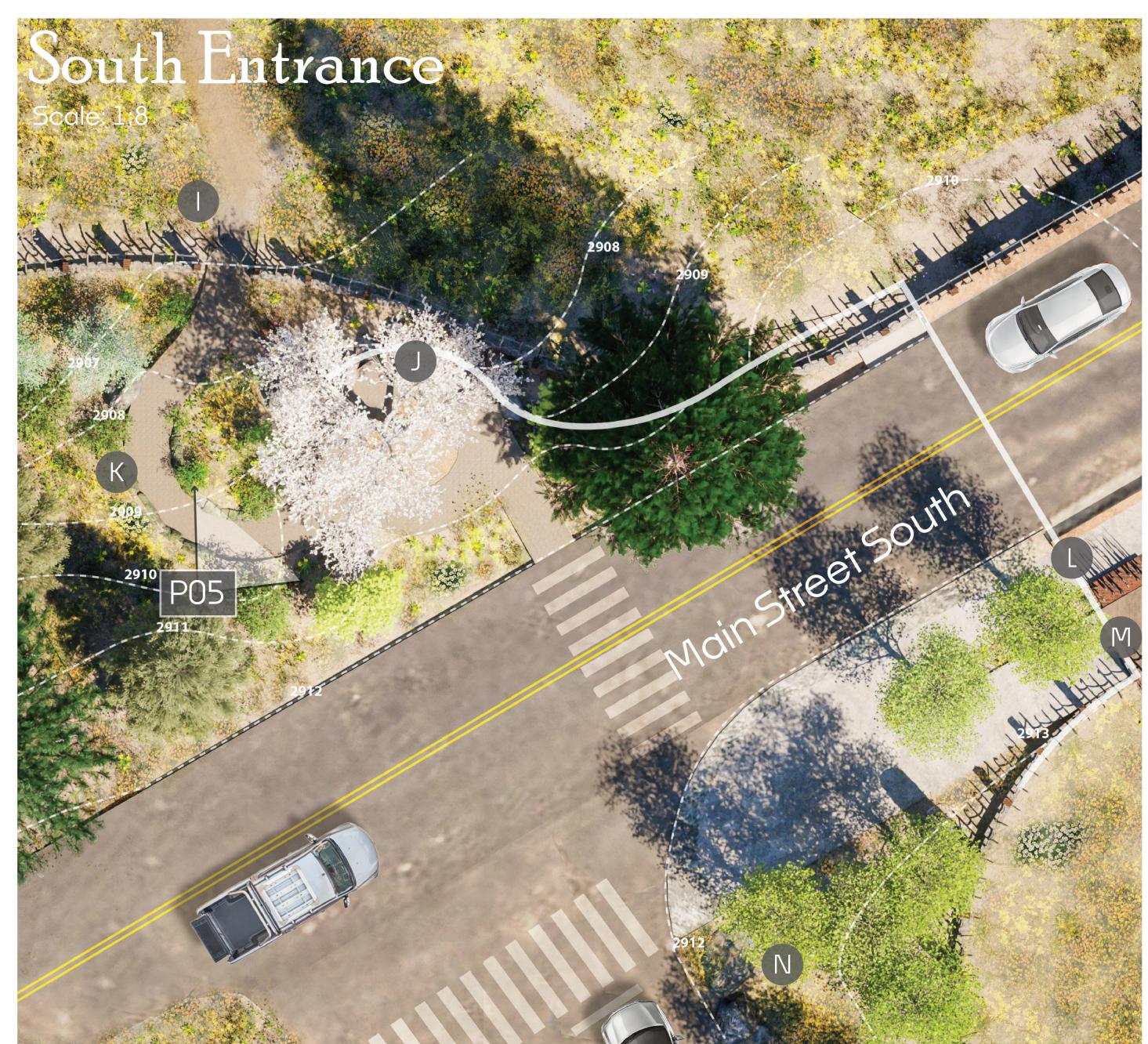


Over-encroaching residential development is the key factor contributing to "Choke Points" and ecological decline in the existing Mission Streamshed. The structurally declining Main Street bridge acts as the ONLY pedestrian walkway between the north and south sides of St. Ignatius.

#### Public Attitude & Beliefs



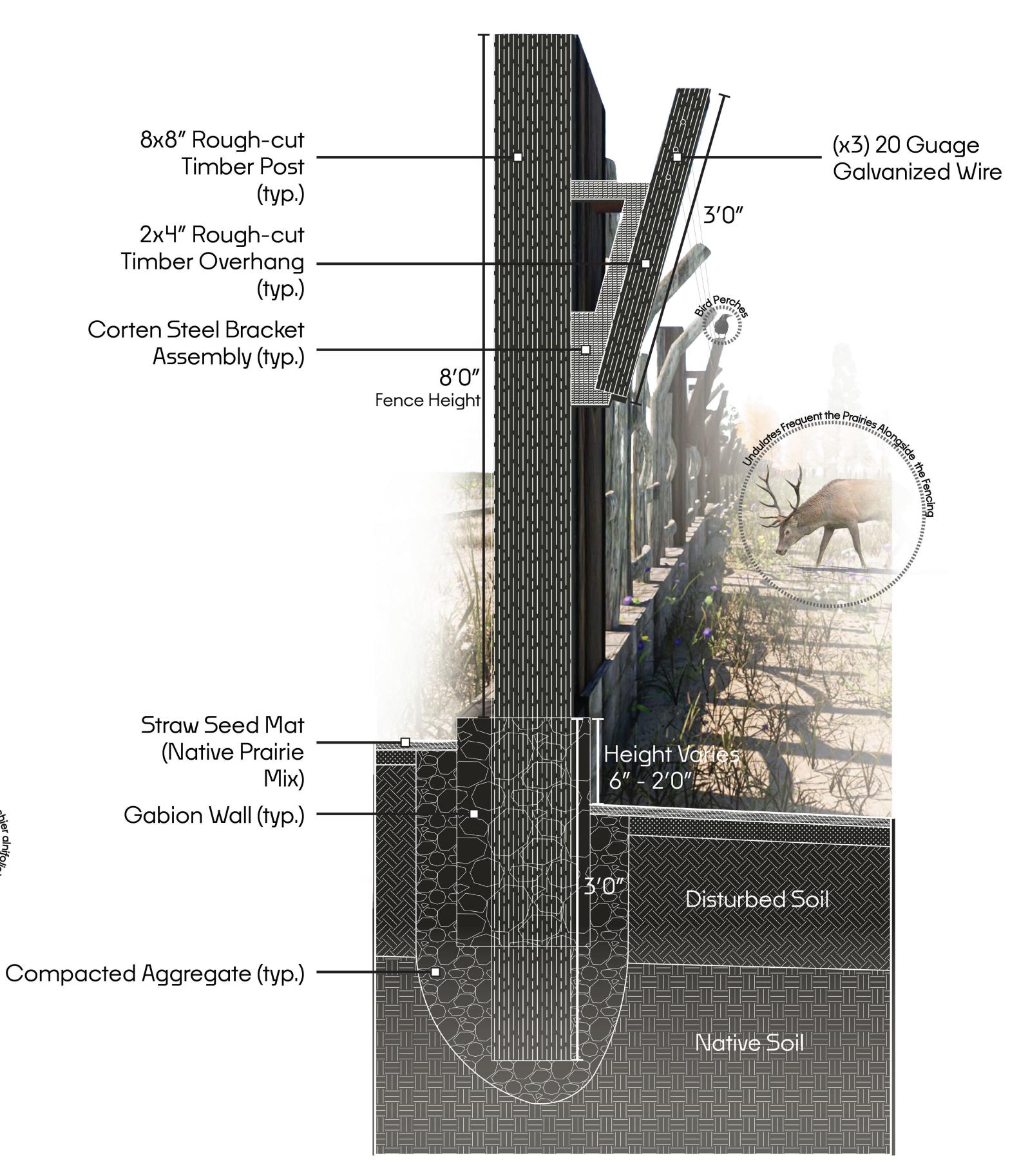
- Positive (Low Conflict)
- Neutral (Moderate Conflict)
- Negative (High Conflict)
- Infrastructure GIS Layer



## Wildlife Fencing Detail

Scale: 1/2"=1'0"

Widlife fencing was determined to be a vital programming element for the effectiveness of any wildlife corridor. Specifications for effective fencing was obtained from the Federal Highways Administration. Natural construction materials better mesh the fencing into its environment and make it less intimidating for wildlife to adapt to.



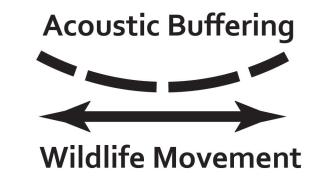


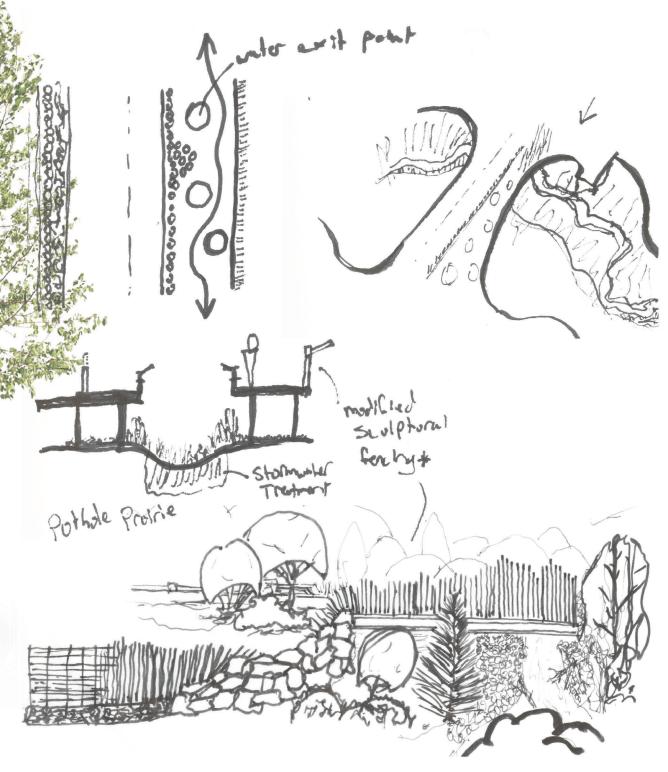


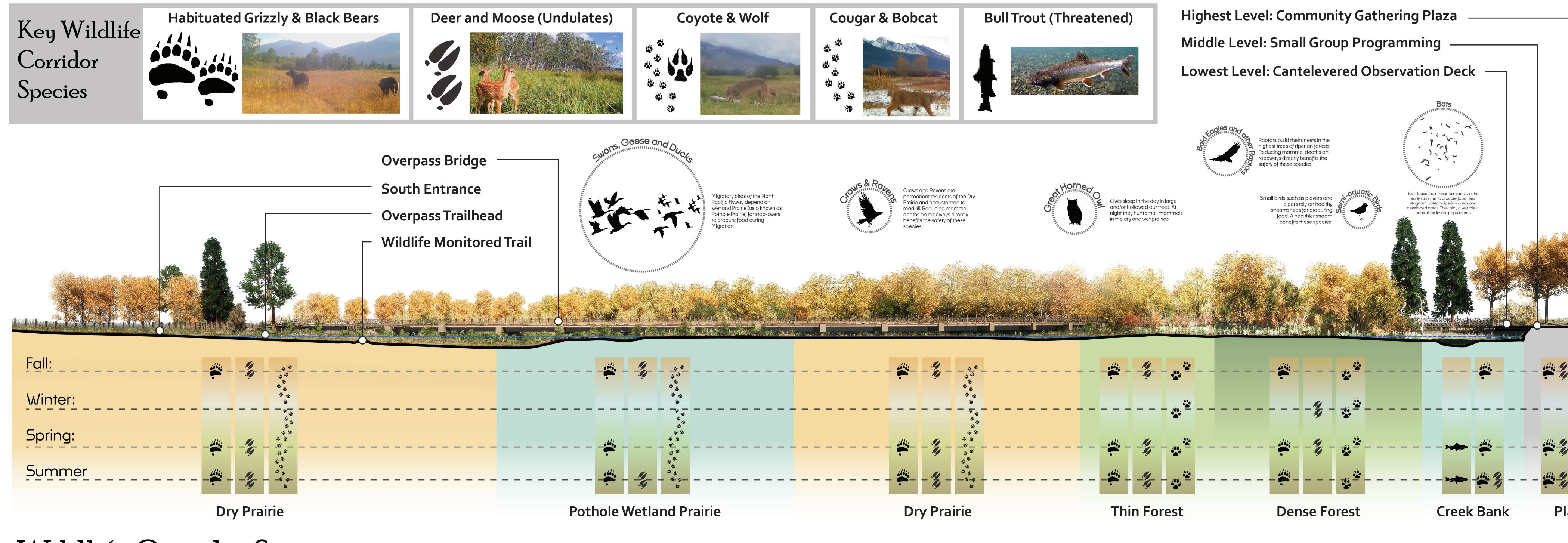
## Conceptual Framework

The conceptual framework for the Main Street overpass involves creating a safe passage for animals to cross under the overpass while using acoustic buffering techniques to minimize the impact of human noise on the animals' natural habitat, creating a more natural and undisturbed corridor. The overpass allows for the animals to move freely across the roadway without the risk of collisions with vehicles, promoting connectivity and preserving the integrity

of the ecosystem.







Wildlife Corridor Section [503]

Scale: 1/16" = 1'0"

Wildlife Monitored Trail

Cutting edge wildlife movement monitoring and pattern recognition is an invaluable tool that the city of St. Ignatius could take advantage of to create a safer trail experience for both Humans and Wildlife. Additionally, in-town opportunities for trail recreation would allow a wider range of users to feel comfortable in nature, something that trails in the Mission Moutain Wilderness do not necessarily offer. Wildlife monitoring sensors and light warning systems are dispersed along the trail around corners, in dense forested areas, and under the overpass to give a heads up to users of wildlife in the area. The best protection against dangerous wildlife such as the Grizzly Bear is both parties making themselves known to each other.



LA772 Department of Landscape Architecture | SoDAA

North Dakota State University | Spring 2023

Professor Jay Kost | Advisor Matthew Kirkwood



