

Keya Wakpala (Turtle Creek Development) Master Plan, Phase I Plan, and Engineering Assessment

Rosebud Sioux Tribe Reservation, Mission, South Dakota



Blue Star Studio

With equal emphasis on economic development, environmental sustainability, and cultural resilience, a master plan raises hope, along with standards for affordable housing.

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The need for affordable, well-built, and sustainable housing within the Rosebud Indian Reservation, home to the Rosebud Sioux Tribe, a sovereign Native Nation, is great. The area is rich in both natural beauty and cultural heritage, and though the community has a deep history of connection to its landscape, these attributes have been challenging to integrate into new development projects. With a growing population and a deep interest in regenerative design, the tribe is adopting a new approach. In 2012, the Rosebud Economic Development Corporation (REDCO) took charge of nearly 590 acres of tribally controlled trust lands with the goal of expanding development of tribal assets while also addressing multiple socio-economic issues faced by the local population, including the loss of traditional culture.

As part of a team led by Blue Star Studio, Biohabitats is helping REDCO realize its vision for a mixed-use housing development known as Keya Wakpala (“turtle creek” in the Lakota language.) Guided by Lakota principles such as mutual respect, self-sufficiency, and family, the master plan for Keya Wakpala aims to create economic opportunity as well as resilient, safe, affordable, and appealing housing for the community. In addition to many commercial and community facilities, the plan also includes sustainable agriculture, onsite wastewater treatment and protection, and enhancement of habitat within the existing wetlands.

As the lead engineering firm on the project, Biohabitats performed preliminary studies related to site, water, and ecology, and met with Tribal representatives to gather feedback on the type of infrastructure they envisioned as desirable and appropriate to the place. Alternatives for suitable-and sustainable-wastewater treatment and stormwater management approaches were selected and evaluated, with the preferred options developed to a concept level. The findings of these studies were used to help REDCO gather community feedback and secure federal funding for the development.