Team BRIDGE

Overview

Team Bridge is comprised of 4 civil engineers. Our goal was to design a safe, economical, and aesthetically pleasing route across Whisky Creek between the Raybrook Homes and the Woodlawn Christian Reformed Church Ministry Center.

In order to provide the best solution possible, the team developed two ways to cross the creek: A bridge or a culvert, connected by a system of paths.

Bridge

The bridge not only serves as a crossing, but also as an attractive landmark for the area.

The bridge consists of a steel structure with a wooden deck, spanning 65 feet with an 8 foot width.

Culvert

The culvert is a practical and cost effective solution.

It consists of two box culverts: A 12 foot by 6 foot culvert at the channel bottom and a 6 foot by 3 foot culvert on the flood plane. The culverts would be backfilled so that a bituminous path could be constructed on top.

Path

In order to maximize the use of the crossing, the path design is compliant with the standards for accessible design of the Americans with Disabilities Act. This means minimizing the slopes, providing adequate landings, and installing railings.

The path design navigates challenging topography which necessitates a certain amount of backfill, excavation, and retaining structures in order to keep reasonable slopes.