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## TOWN OF GIBRALTAR

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# Town of Gibraltar Fish Creek Passage Final Report

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### Introduction

The Town of Gibraltar is in the Door County Peninsula adjacent to the waters of Green Bay, and about 20 miles north of Sturgeon Bay. The community has a population of 1256 full time residents, with thousands of seasonal residents and visitors. The Town provides a wide array of municipal services. With access to thousands of acres of parks, and water activities. Gibraltar provides a small-Town environment with a rich history and ideal proximity to regional amenities. Gibraltar offers convenient access to retail, restaurants, specialty shops and services, all while preserving its natural beauty and quaintness.

### Project conception

In 2018 citizens of Gibraltar who were engaged in an extensive Fish Creek watershed study discovered the culvert located under State Hwy 42 and serving the outfall for Fish Creek was too steep to allow fish to return upstream to spawn. An effort led by those citizens created a design concept to install a fish passage in the culvert allowing native species of sucker and pike to return upstream through this cut out passageway.

Efforts were made to secure funds through Town participation and grant funding. After awarding the grant funding the Town set course in 2021 to install the passage.

### Project description

The Town hired Miller Engineers to design and oversee construction of the passage. Miller engineering designed a three-baffle system consisting of three tiers with a total width of approximately two feet and a length of approximately 16ft. Miller Engineering additionally designed waterway stream diverters to assist the fish through the culvert.

Miller Engineers designed access tracking pads and access point for construction vehicles and equipment. Miller Engineers additionally included in their design reclamation of the construction area to its original natural state.

### Construction

I contacted Mr. Wiegand PE with the State of Wisconsin Department of Transportation to obtain access permission to complete work in the State right of way.

The Town of Gibraltar in 2022, with the assistance of Miller Engineers hired Grube Construction to complete the project. The Town of Gibraltar Maintenance Staff assisted Grube Construction with the tracking pad installation, and the creek bed reclamation. In November 2022 the construction began. Sandbags were used to divert the stream allowing for clean access to the work area. Debris collection and water filtration methods were deployed in the construction area. Over two weeks Grube construction sawed the culvert, installed the necessary rebar, created tiered passage channels, and poured the final concrete in place. Water diversion baffles were installed in the culvert chamber upstream. The concrete was placed under heated blankets and heated for a week to ensure concrete integrity. Grube Construction cleaned the work area and removed the sandbags. Town maintenance staff with the guidance of the DNR. Placed shoreline logs and reclaimed the creek shoreline.

With the stream bed restored and debris removed the water flows directly into the newly created fish passage and out to the Bay.

## Inspections

Starting with the site layout, Miller Engineers provided on site engineering throughout the entire project. Inspecting the sawing, rebar, and preforming concrete density tests, and stream bed reclamation integrity. Miller Engineers will be the source for any technical aspect of reporting.

The Construction foreman from Grube construction and I inspected the work area, downstream, and upstream to assure satisfactory construction of the fish passage.

I further inspected the work on site with Miller Engineering Field technician. We reviewed the reports and concluded satisfactory results.

I further contacted Mr. Wiegand From WDOT to inform him the site was ready for final state inspection as the culvert is in the State right of way. December 15, 2022, Mr. Rj Tilleman Field inspector for the DOT approved the final construction from the State of Wisconsin.

## Conclusion

The Town of Gibraltar is excited for the Spring of 2023 to observe the travelling of fish back up our creek that hosts the village namesake. The Town of Gibraltar is happy to report the Fish passage installation is a success and looks forward to future stream projects.

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