



REHABILITATION OF BRIDGE NO. 3003
ON US 1 OVER BIG GUNPOWDER FALLS

2022 MARYLAND
CONCRETE CONFERENCE



MARYLAND DEPARTMENT
OF TRANSPORTATION

STATE HIGHWAY
ADMINISTRATION



ALVI ASSOCIATES, INC

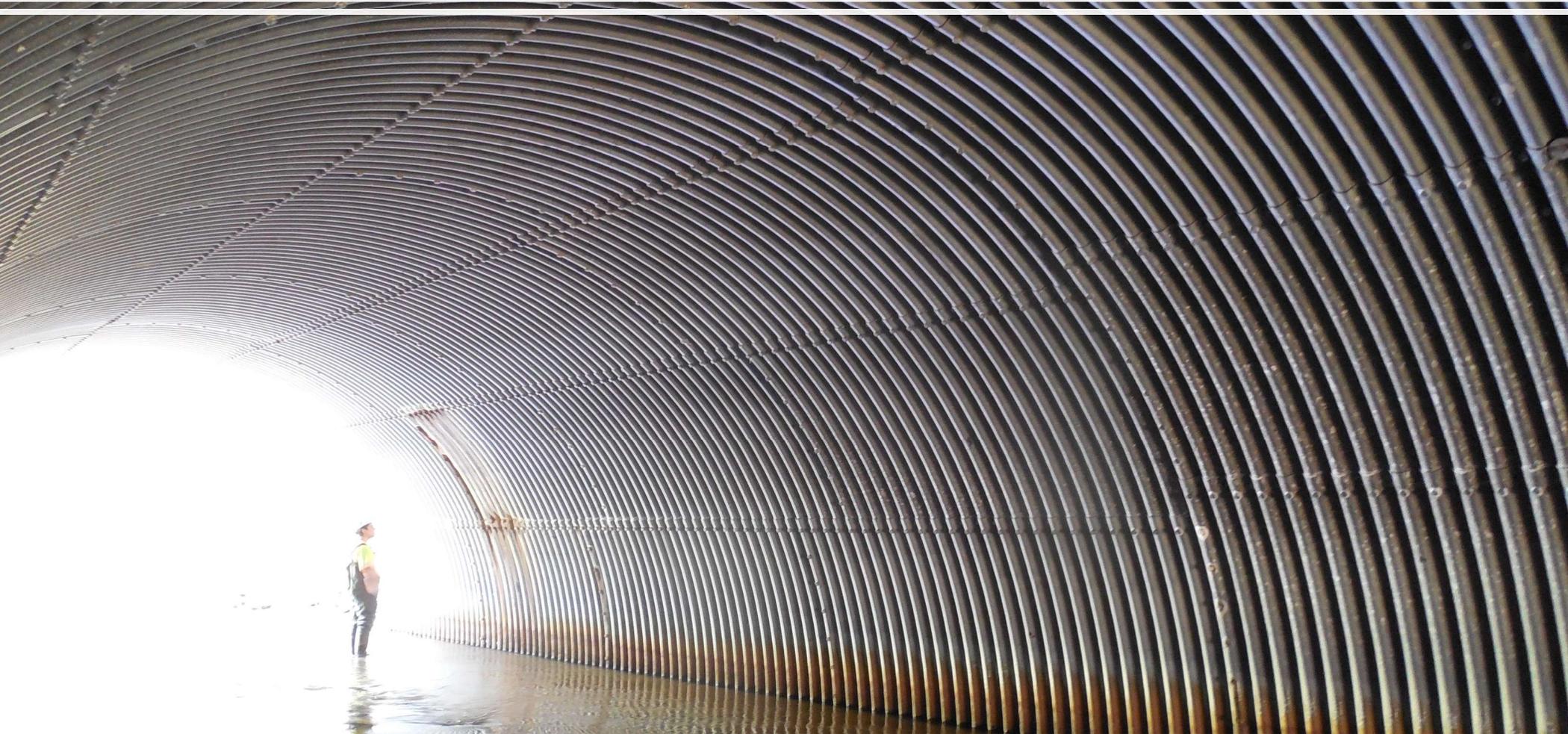
ALA

MARINE
TECHNOLOGIES, INC.

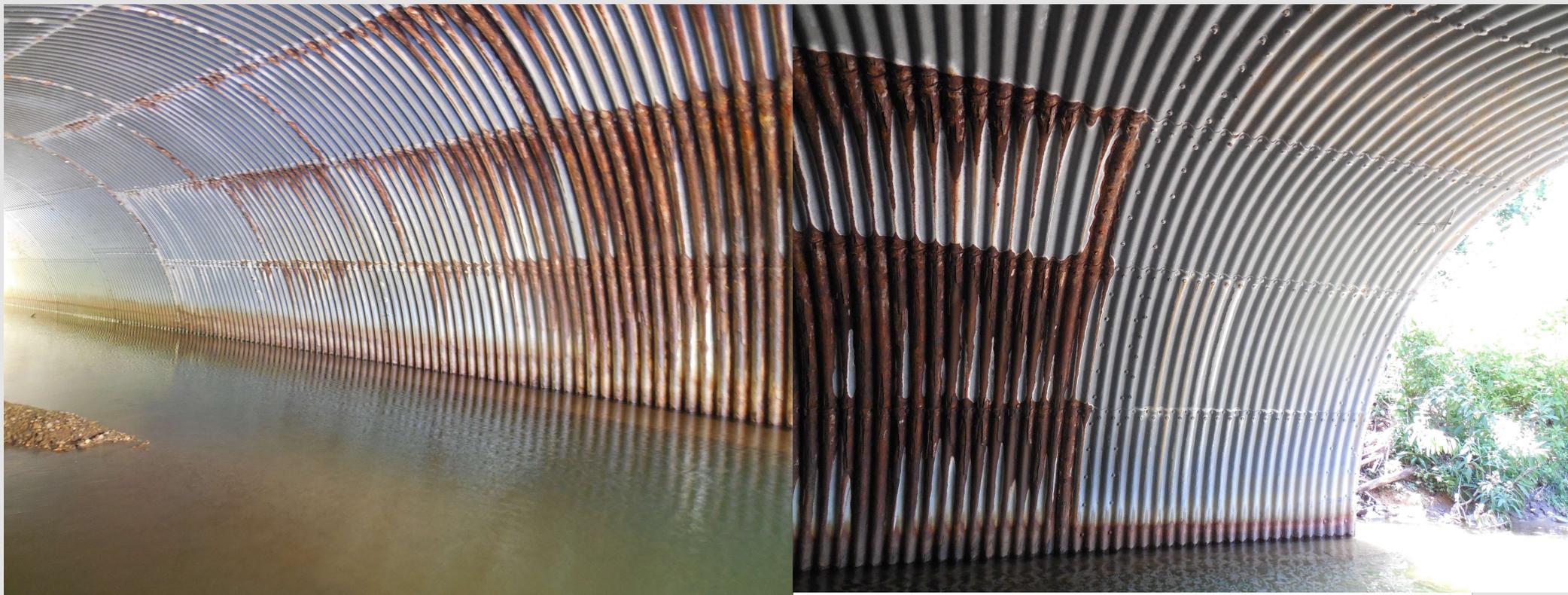


LOCATION MAP

INITIAL INVESTIGATION
JULY 2015



EXISTING CONDITION PHOTOS



EXISTING CONDITION PHOTOS



EXISTING CONDITION PHOTOS





Project Scope
of Work

- Provide an independent structure which does not rely on the existing structure for strength.
- Investigated various lining options including PE liners, geopolymers, and reinforced concrete.
- River arches lined with an independent structure consisting of a 9-inch-thick reinforced concrete arch ring.
- Pedestrian tunnel to be slip lined with a new structural plate pipe structure.
- Drainage and stabilization improvements of DNR trail.

BID RESULTS

- Contract BA0485180 bids were opened Nov. 1, 2018
- Seven bidders submitted with prices ranging from \$3.1 to \$11.2 million
- Marine Technologies, Inc. (Baltimore, MD) awarded the contract for \$3,104,950



Temporary Stream Diversion



Arch
Reinforcing

ARCH CONCRETE SPECIFICATIONS

- Contract was originally Advertised Specifying Self-Consolidating-Concrete (SCC) with $f'c = 7,000$ psi.
- Changed by Addendum to Utilize Modified SHA Mix No. 6 with Arches Formed and Poured in 3 Sections.



Formwork
Removed

Completed
Arch
Construction





Downstream
Elevation



New Pedestrian Tunnel

Completed Pedestrian Tunnel



Improved Pedestrian Trail



Completed Pedestrian Trail & Tunnel



Questions ?

