EMILY LAKE ROAD BRIDGE, HOUGHTON COUNTY, MI

DESIGN TYPE: Timber Box Culvert
YEAR BUILT: 1996
DESIGN ENGINEER: UP Engineers & Architects, Inc.
FABRICATED BY: Wood Development Corp.
INSTALLED BY: Paul's Remodeling, Hancock, MI
SPANS OVER: Misery River
LOCATION: SE¼, Sec. 22 T52N R36W
Emily Lake Road Bridge

BRIDGE GEOMETRY

- Spans: 1
- Number of Lanes: 2
- Total Length (feet): 16'4"
- Out-to-Out Width (feet): 28'10½"
- Curb-to-Curb Width: 27'11½"
- Chord Lamina Size: 1.833"x14"
- Load Rating: HS-20
- Average Daily Traffic: 200
- Superstructure Cost: $66,100
- Superstructure Cost/ft²: $140
- Total Project Cost: $105,400

BRIDGE MATERIALS

DECK
- Species: No. 2 and 3 Hemlock
- Quantity: 35 MBF
- Preservative: CCA

GUIDERAILS
- Species: NA
- Preservative: NA

WEARING SURFACE
- Asphalt (4"

LOCAL IMPACT

The timber box culvert replaced two existing 36" culverts which flooded regularly, causing two upstream lakes to rise over their banks and threaten cottages. Improved traffic safety is also a result of the new timber culvert.

BRIDGE PERFORMANCE

To date, the performance of the box culvert is adequate with no evidence of material deficiency.

FABRICATION & ERECTION

The fabricated materials were of a very high quality. Assembly time of the timber box culvert, including wing walls was 15 days with no intermittent weather delays.

FUNDING SOURCES

- USDA Forest Service: $35,000
- Other Sources: $70,400

LOCAL CONTACT

Name/Title: Jim Manderfield, P.E.
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WIT Program Proposal Number: NA-33-95
Federal Grant Identifier: NA-95-0130

COOPERATING AGENCIES

USDA Forest Service
NORTHEASTERN AREA
STATE & PRIVATE FORESTRY

Upper Peninsula RC & D Area, Inc.

MICHIGAN DNR

September 1998