Problem Statement and Goals
MTOBridge

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Table 1: Revision History

Date	Developer(s)	Change
9/22/2022	Pedram Yazdinida	First Draft

1 Problem Statement

1.1 Background

For years, Bridge engineers in Ontario have used the Canadian Highway Bridge Design Code (CHBDC) (CSA S6-19) which typically features conservatism and adds excessive costs. With the development of refined methods of analysis, engineers can precisely determine the properties and constraints of the proposed design. Nevertheless, the new methods of analysis have yet to be offered within a one-stop program with an intuitive and simple UX.

1.2 Problem

This is an ongoing project in partnership with the Ontario Ministry of Transportation (MTO). The software engine application code has already been developed and validated by a Ph.D. student from the Department of Civil Engineering using MATLAB Editor. The developed MATLAB code is ready to be packaged with other software components (Interactive User Interface (UI), well-defined Input/Output (I/O), and standard bridge section Database).

1.3 Inputs and Outputs

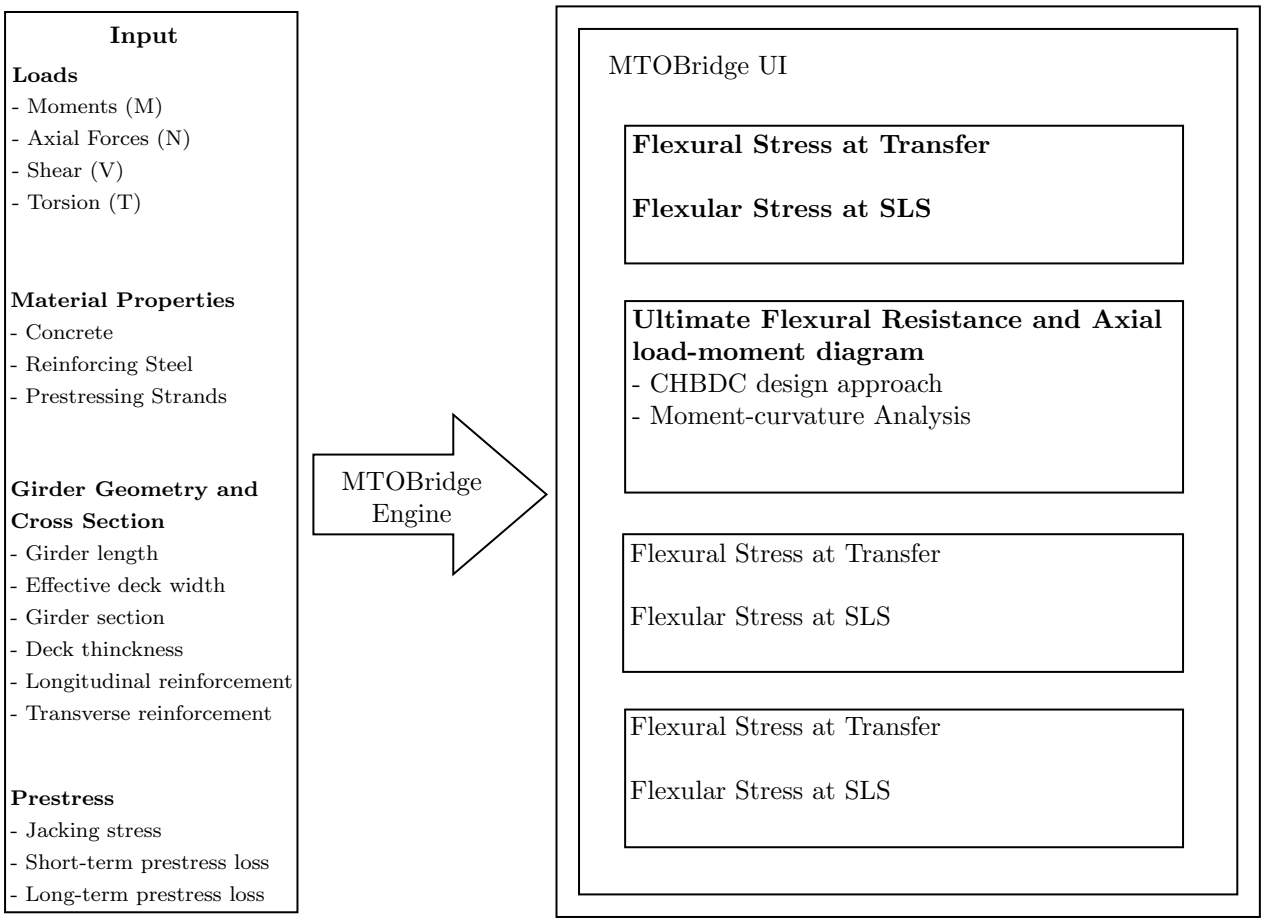

Figure 1: **MTOBridge Data Flow**

1.4 Stakeholders

- Ontario Ministry of Transport
- Department of Civil Engineering, McMaster
- Department of Software Engineering, McMaster

1.5 Environment

- Compatible with the latest Windows 10 versions (20H1+)
- Fully operational offline
- Requires C++ GNU compiler

2 Goals

3 Stretch Goals