

Verification and Validation Report: Bridge Corrosion

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1 Revision History

Date	Version	Notes
Apr. 14 2024	1.0	Initial release

2 Symbols, Abbreviations and Acronyms

See SRS Documentation at [SRS](#).

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This document includes the results of [VnVPlan](#). To re-generate the result, you can run “make test” in the root folder of this repo.

3 Functional Requirements Evaluation

This section covers the tests of the functional requirements.

3.1 Input tests - Coordinate

This test classifies the valid and invalid input from user. It is covered by unit testing in [test_input_check.py](#). All the test cases passed successfully.

3.2 Input tests - Models

This test check if there are any missing values from the input climate and traffic model. It is achieved by unit testing in [test_model_input.py](#). All the test cases passed successfully.

4 Nonfunctional Requirements Evaluation

This section covers the tests of the non-functional requirements.

4.1 Usability

4.2 Performance

5 Unit Testing

6 Changes Due to Testing

[This section should highlight how feedback from the users and from the supervisor (when one exists) shaped the final product. In particular the feedback from the Rev 0 demo to the supervisor (or to potential users) should be highlighted. —SS]

7 Automated Testing

8 Trace to Requirements

	R1	R2	R3	NFR1	NFR2	NFR3	NFR4
t_input_check.py	X						
t_model_input.py	X						
Test ??		X	X				
Test ??				X			
Test ??					X		
Test ??						X	
Test ??							X

Table 1: Traceability Between Test Cases and Requirements

9 Trace to Modules

	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14
t_calculation					X	X	X	X	X	X	X	X	X
t_model_input					X								
t_input_check	X	X											
t_search.py		X	X										
t_visualization				X									

Table 2: Traceability Between Test Cases and Modules

10 Code Coverage Metrics