ALMA MATER STUDIORUM – UNIVERSITA' DI BOLOGNA

DEPARTMENT OF

CIVIL, CHEMICAL, ENVIRONMENTAL, AND MATERIALS ENGINEERING - DICAM

Medium-Span Timber Footbridges – A Comparative Analysis with Traditional Steel and Concrete Structures (Technical, Environmental, and Structural Aspects)

Case Study within the "Seine – Escaut Est" Project: Structural Adaptations for the 2000-Ton Navigation Standard on the Nimy-Blaton-Péronnes Canal

ANNEX 3: STRUCTURAL RENDERINGS

Promoter:
Stefano Silvestri (Associate Professor of Structural Design at the University of Bologna - Department of Civil, Chemical, Environmental, and Materials Engineering)

Co-Promoter:
Frédéric Gens (Part-time Lecturer at ULiège – Project Director at Bureau Greisch – Expert in Civil Engineering Structures)

Student:
D'ANNA Antonio

Matriculation Number:
0001138704

Degree Programme Class:
LM-23 R - Civil engineering – Structural Engineering

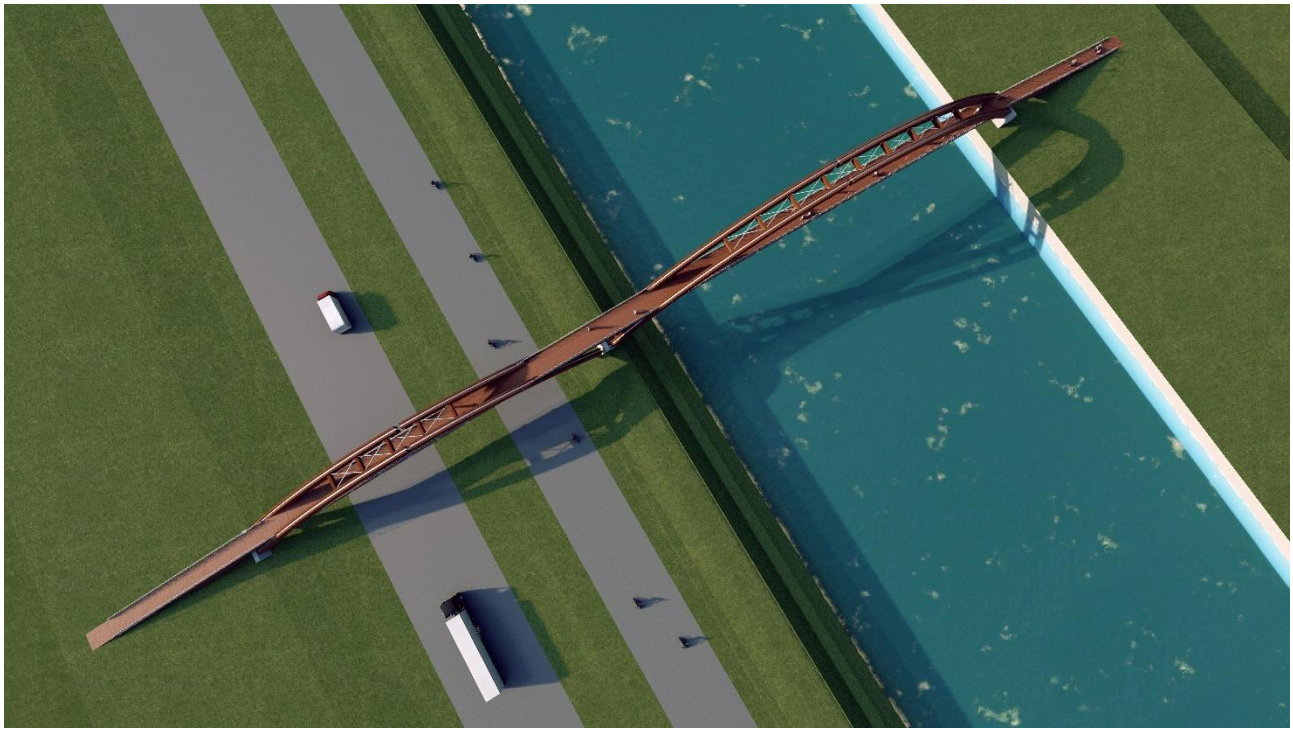
Session:
1

Academic Year:
2024-2025

TABLE OF CONTENTS

TABLE OF FIGURES - RENDERINGS

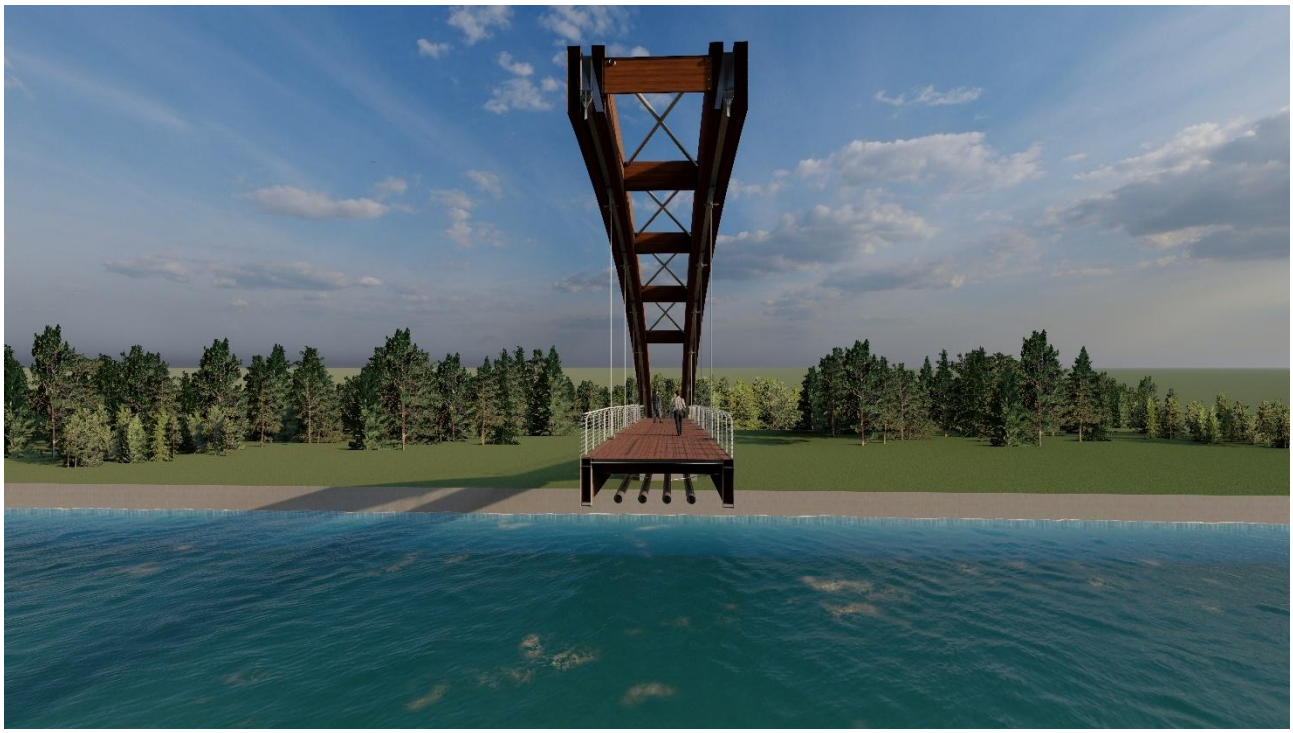
1 STRUCTURAL AND ENVIRONMENTAL RENDERINGS



Rendering 1: Top View of the Pedestrian Bridge Showing the Overall Alignment and Structural Layout Across the Canal

Rendering 2: Lateral View Illustrating the Double-Arch Configuration and its Integration within the Surrounding Landscape

Rendering 3: Perspective from the Ramp Entrance, Highlighting the Timber Elements and Pedestrian Access



Rendering 4: Cross-Section View of the Deck, Showcasing the Suspended Walkway and Structural Symmetry

Rendering 5: Under-Deck View Emphasizing the Connection between Arches and Deck as well as the Arrangement of Hangers

Rendering 6: Oblique View from the Riverbank, Illustrating the Articulation of the Support at the Foundation Level

Rendering 7: Close-Up of the Arch Support on the Abutment Wall and Interface with the Concrete Base

Rendering 8: Axial View From Mid-River, Showing the Spatial Rhythm of the Arches and Vertical Hangers

Rendering 9: Side View from the Opposite Riverbank with Focus on the Approach Ramps and Adjacent Green Area

Rendering 10: Pedestrian Perspective from the Deck, Highlighting the Railing System and Walking Experience Under the Structural Frame

Rendering 11: Pedestrian View at Sunset, Highlighting the Spatial Perception within the Twin Glulam Arches and the Impact of the Structural Environment