Post-Event Serviceability of RC Bridge Bents Using Visual Inspection

Mostafa Tazarv, and Kwanghee Won

Departments of Civil and Environmental Engineering and Electrical Engineering & Computer Science

South Dakota State University

SOUTH DAKOTA STATE UNIVERSITY

Project Summary Prepared for:
TriDurLE

May 7, 2020

Funding Agencies & Collaborators

- National Center for Transportation Infrastructure Durability and Life Extension (TriDurLE), and University Transportation Center(UTC).
- South Dakota State University

TriDurLE

National Center for Transportation
Infrastructure Durability & Life-Extension

SOUTH DAKOTA
STATE UNIVERSITY

Project Goals and Objectives

The main goal of this proposal, which is the first phase of a multi-phase project, is to accelerate post-earthquake bridge inspection using "**computer vision**". Instead of sending trained personnel to the affect bridge sites, a drone can be used as a fast inspection device.

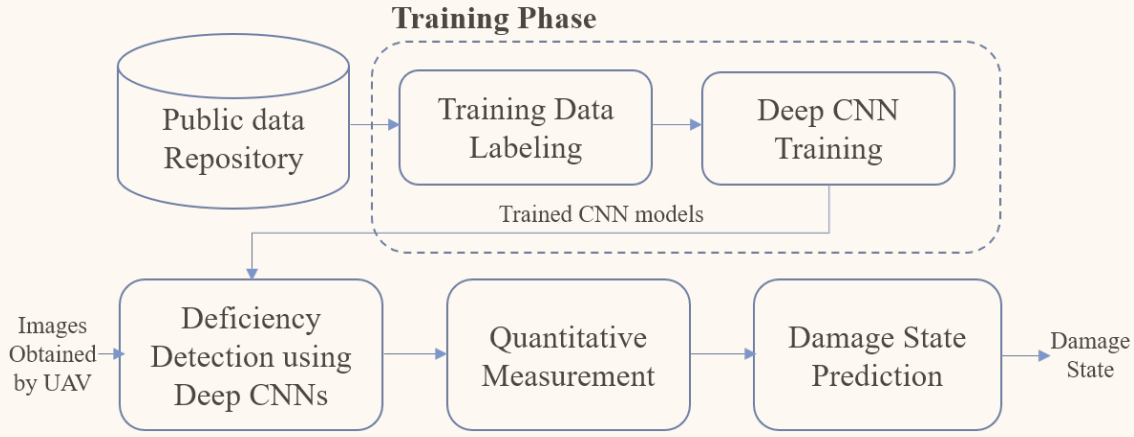
Project Work Plan

- Task 1: Literature Review,
- Task 2: Bridge Column Database Development,
- Task 3: Relate Apparent Damage to Displacement Demands,
- Task 4: Software Development,
- Task 5: Software Verification,
- Task 6: Project Deliverables.

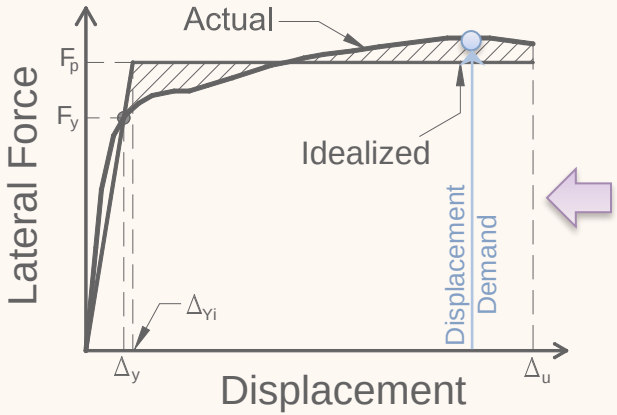
Project Roadmap

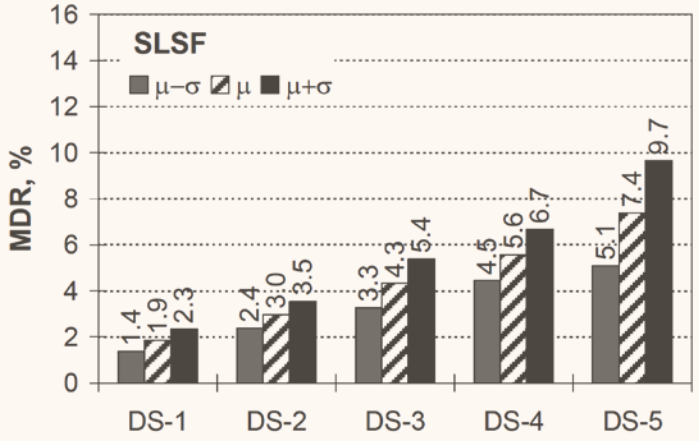
Bridge Column Database
(Tasks 1 & 2)

Software Development (Tasks 4 & 5)



Damage-Displ. Relationships (Task 3)





Bridge Evaluation

Inspected

Limited Use

Unsafe

Questions?

Mostafa Tazarv, PhD, PE,
Assistant Professor
Department of Civil and Environmental Engineering
South Dakota State University
Tel: (605) 688-6526, Fax: (605) 688-6476
Mostafa.tazarv@sdstate.edu
https://sites.google.com/people.unr.edu/mostafa-tazarv