Model Campanile Carillon
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Mechanical Engineering – DE7 Campanile

Frame
- Base of towers now are C-channels instead of tubular beams
- Outriggers have been added that double as tower support and benches for playing carillon and photo opp
- Casters and Leveling feet will stabilize and assist in tower transit to destination

Project Overview
The goal of this project is to create a scale model of the Campanile Carillon. This model is to accomplish the following goals:
- Create a 1:5 scale operational model
- Assembled/disassembled quickly with minimal staff
- Easily transported across country
- Must be a fully functioning Carillon

Scissor Lift
- Lift is designed with linear shaft bearings for actuation via jack screw
- Joints were re-designed for lighter overall weight and simplicity of design
- Jack screw actuation provides a safety lock feature preventing collapse

Façade
- Painted and milled foam tower portion with aluminum frames to allow attachment to scissor lift
- Pictorial mesh on rear of design to mimic the view seen through the ISU Campanile (Central Campus or MU)
- Plexiglas removable covers for side structure

Bench Structures
- Modeled after current benches
- Act as supporting outriggers as well as a photo opportunity
- Ease of assembly and disassembly

Key Details
- Casters allow the design to be aligned and assembled with ease
- The side structures and outrigger assemblies are attached with user friendly systems to allow for faster assembly

Next Stage Definitions
- Finalize façade, spire design, and materials
- Determine long term transportation logistics
- Selection of appropriate player bench
- Façade attachments and material selection
- Set-up, teardown, and packaging procedures

Carillon
- Steel linkages connect keyboard to clappers. Able to take large amounts of strain
- Rocker bars and spring loads take force off of the clapper recoil

Frame, Project Overview, Scissor Lift, Façade, Bench Structures, Key Details, Next Stage Definitions, Carillon