Problem Statement: Complete a model scale replica of the Iowa State Campanile that is accessible, functional, and can withstand against the elements.

Customer Requirements:
• Height is 1/5 of actual campanile (~22 ft).
• Fully functional carillon.
• Ease of assembly/disassembly.
• Will not break under normal wear and tear.
• Portable and easy to transport.
• Can withstand winds up to 50 mph.
• Weight under 3000 lbs.
• Matches likeness of the Campanile in sound and looks.

Project History:
• 8th semester of ongoing project.
• Multiple redesigns and fabrications.
• The model Campanile has not been assembled prior to this semester.
• Strict deadline of October 27th – Bells of Iowa State Gala Anniversary Concert.

Problems Encountered:
• No instructions on how to assemble the scissor lifts.
• Most of previous semester files were corrupt or nonexistent.
• All parts for the 6-ft scissor lift assembly were missing.
• Acme screw on the 6-ft scissor lift buckled.
• T-bars bowed because of horizontal force from acme screw.
• 6-ft scissor lift did not reach maximum height.

Key Accomplishments:
• Redesigned and modified multiple parts of both 4-ft and 6-ft scissor lifts.
• Assembled 4-ft scissor lift on top of the 6-ft scissor lift for the first time.
• Fully assembled model Campanile with the façade team.
• Met strict deadline for the Bells of Iowa State Gala Anniversary Concert.
• Completed complex math model analysis of the scissor lifts.

Future Project Goals:
• Modify the T-bar on 6-ft scissor lift to address the issue of it not reaching it’s maximum 6-ft height.
• Possible resizing of acme screw on the 6-ft scissor lift.
• Repair acme screw on 4-ft scissor lift.
• Adjust scissor lift as needed to counteract leaning issue.