

Midterm Presentation

- IPRO 315, Spring 2008
- Design of Large Scale Structure
- (Automated Parking Garage)

Name	Major
Brady*, Brian	AE
Butkovich, Paul	ME
Chung, Chun	CE
Dominikowski*, Marek	ARCH
Herbert, Greg	ME
Hussaini, Nuddasir	ARCH
Magdel**, Irina	CE
Mallinger, Nicolle	ARCE
Omeralovic, Enis	ARCH

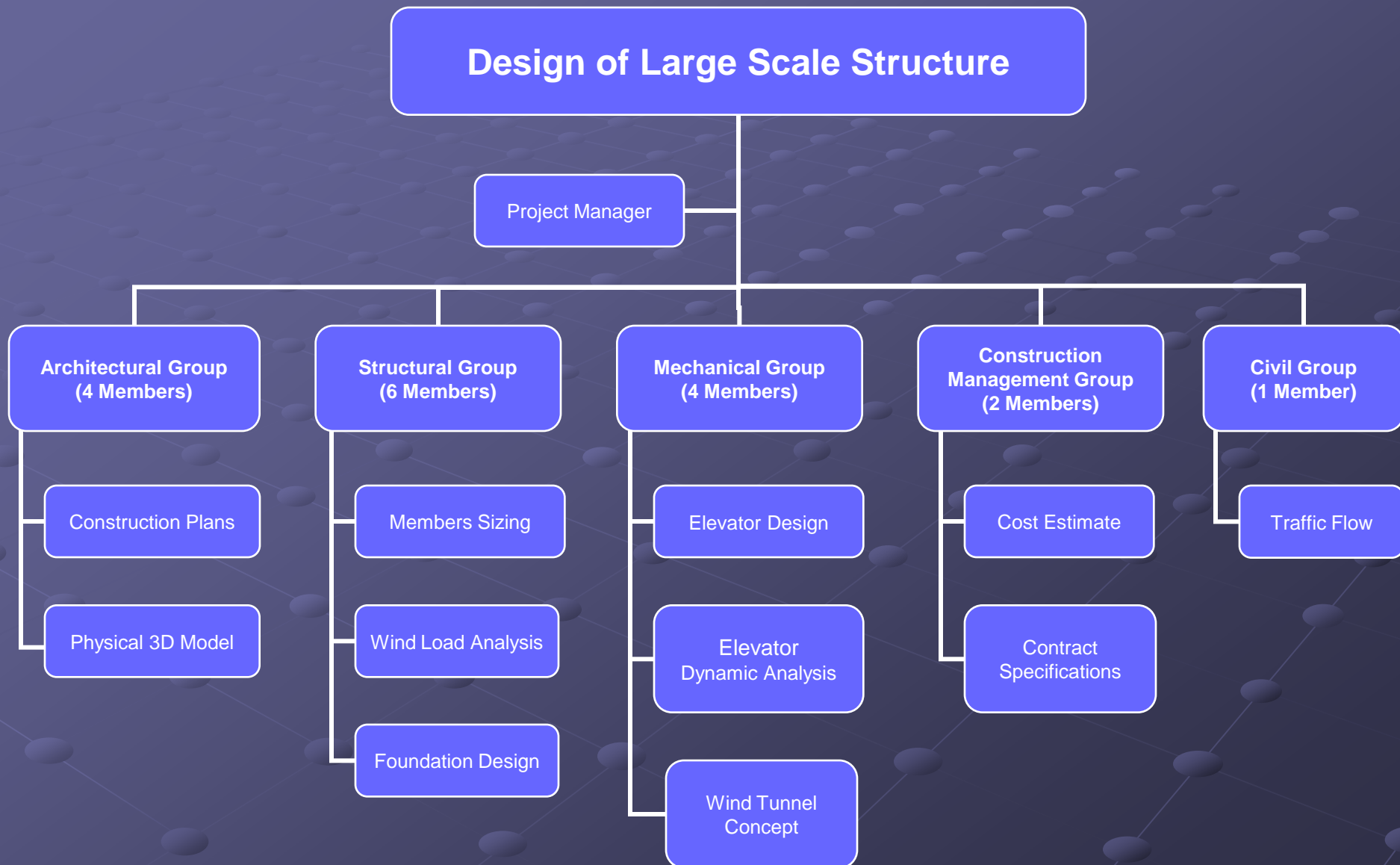
* Group Leader

** Project Record Keeping/Liaison
with IPRO Office

Name	Major
Palma, Jennifer	CE
Rathakrishnan*, Malar	CE
Ratnani*, Shoaib	CE
Russeva, Diyana	CE
Russo*, Ben	CE
Shim, Mary	ARCH
Sisay, Mary	CE
Varhegyi, Aron	ME
Velichekov*, Veselin	CE

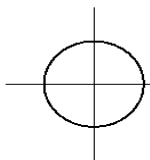
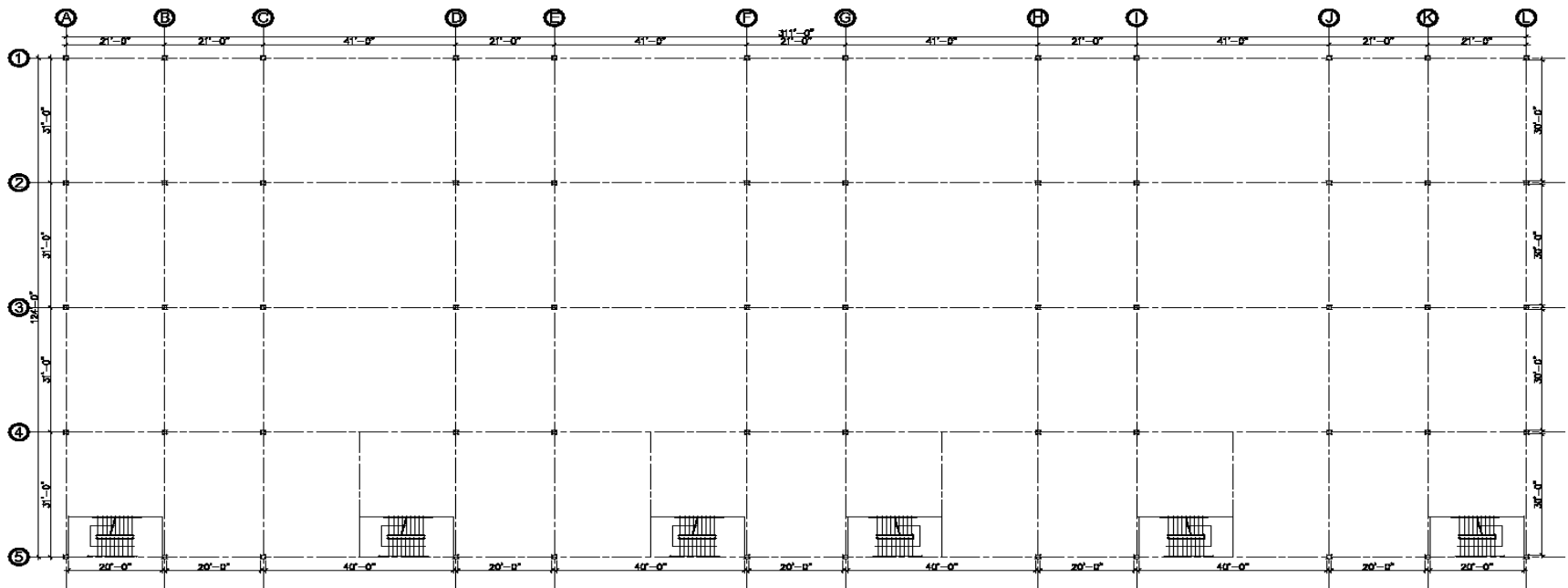
* Group Leader

IPRO 315, SPRING 2008



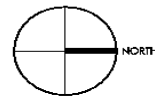
Architectural Group

● Construction Plans



FLOOR PLAN

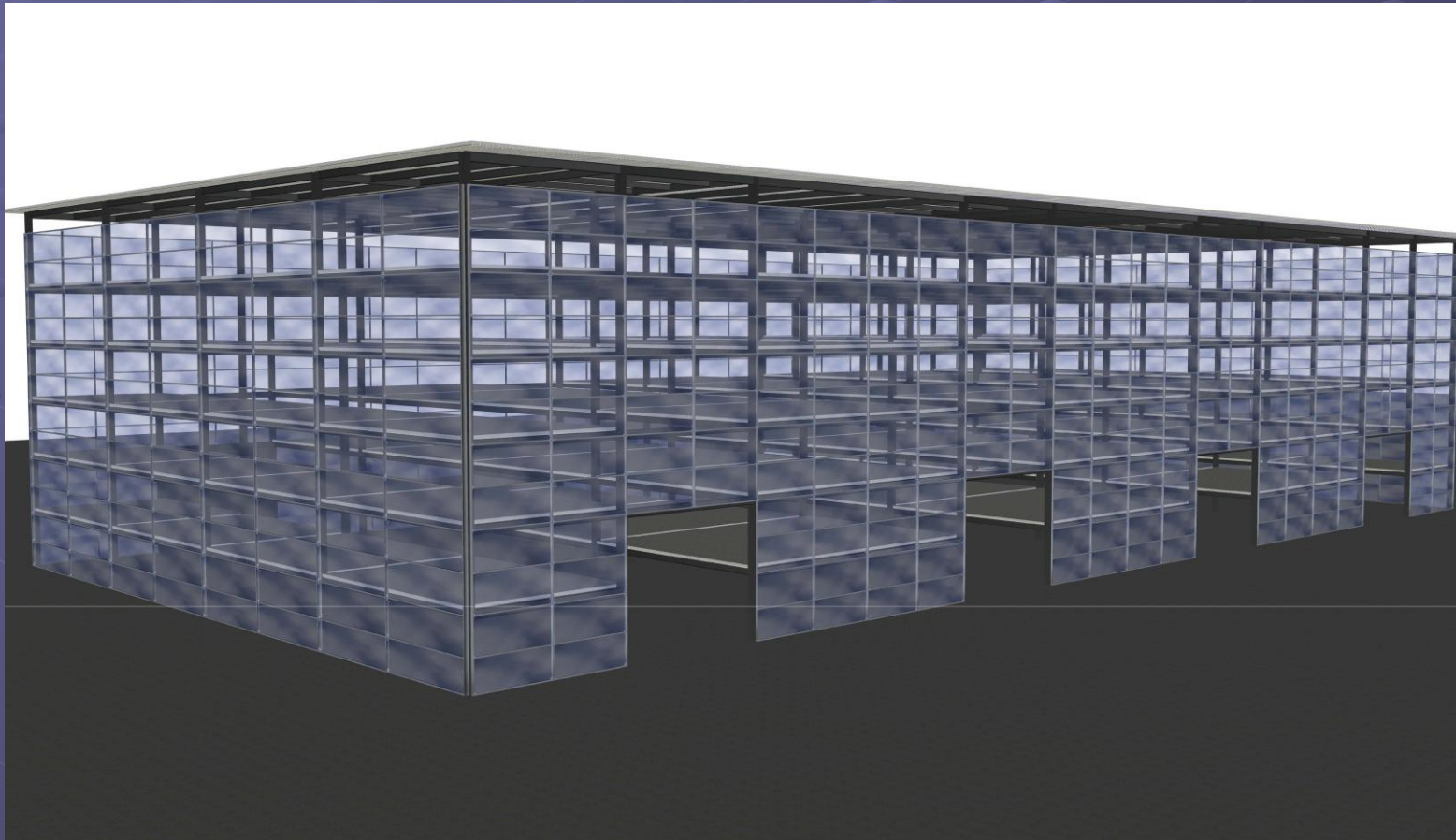
SCALE: 1/32" = 1'-0"



NORTH

Architectural Group

- Physical 3D Model



Architectural Group

- Physical 3D Model

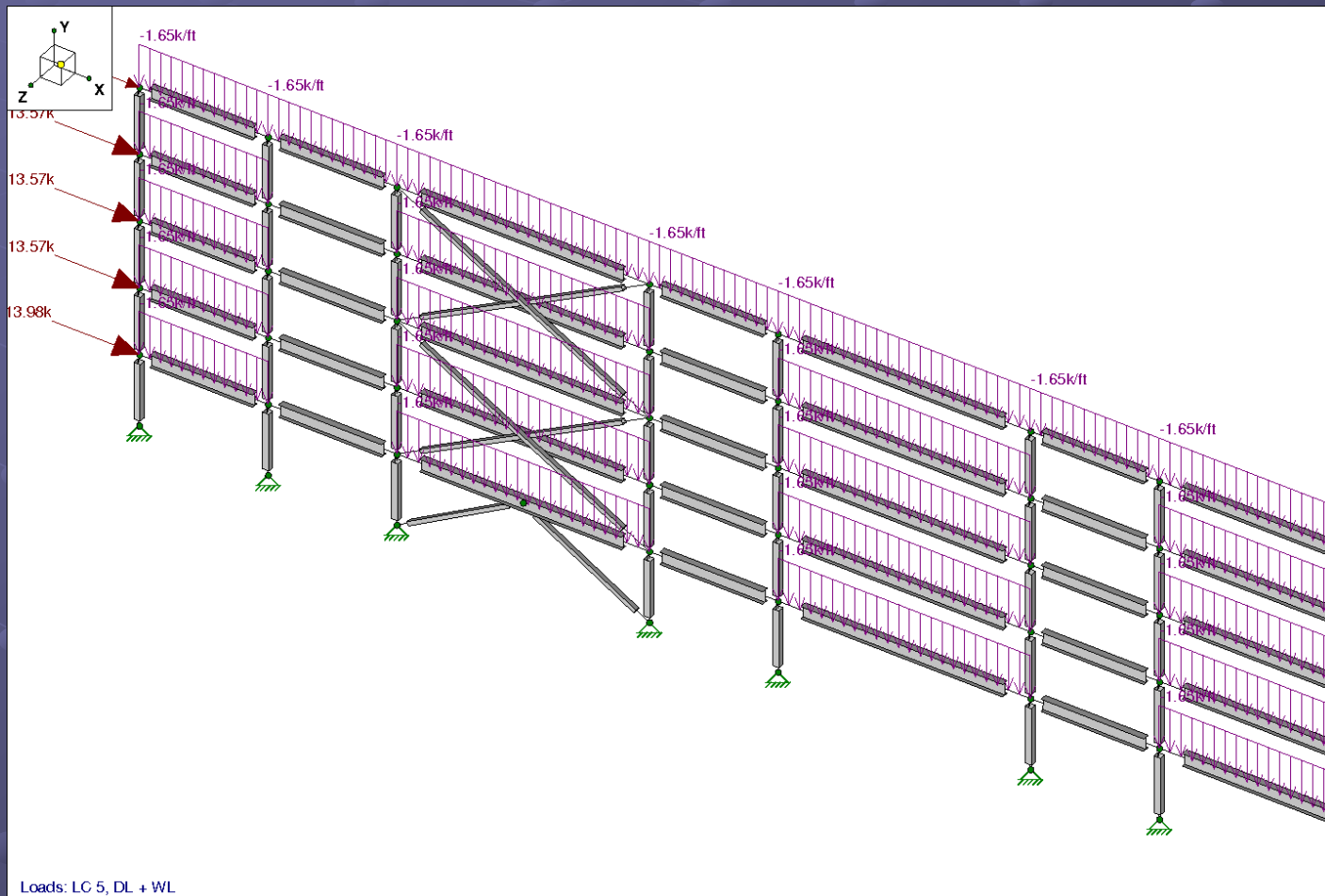


Structural Group - Members

- Work based on 2008 Chicago Building Code.
- Currently sizing the support girders for hollow-core planks floor system.
- Procedure for beam selection was typed up in MathCAD to ease updates.
- Meet in the second half of the semester with CAE professor for advice on connections design.

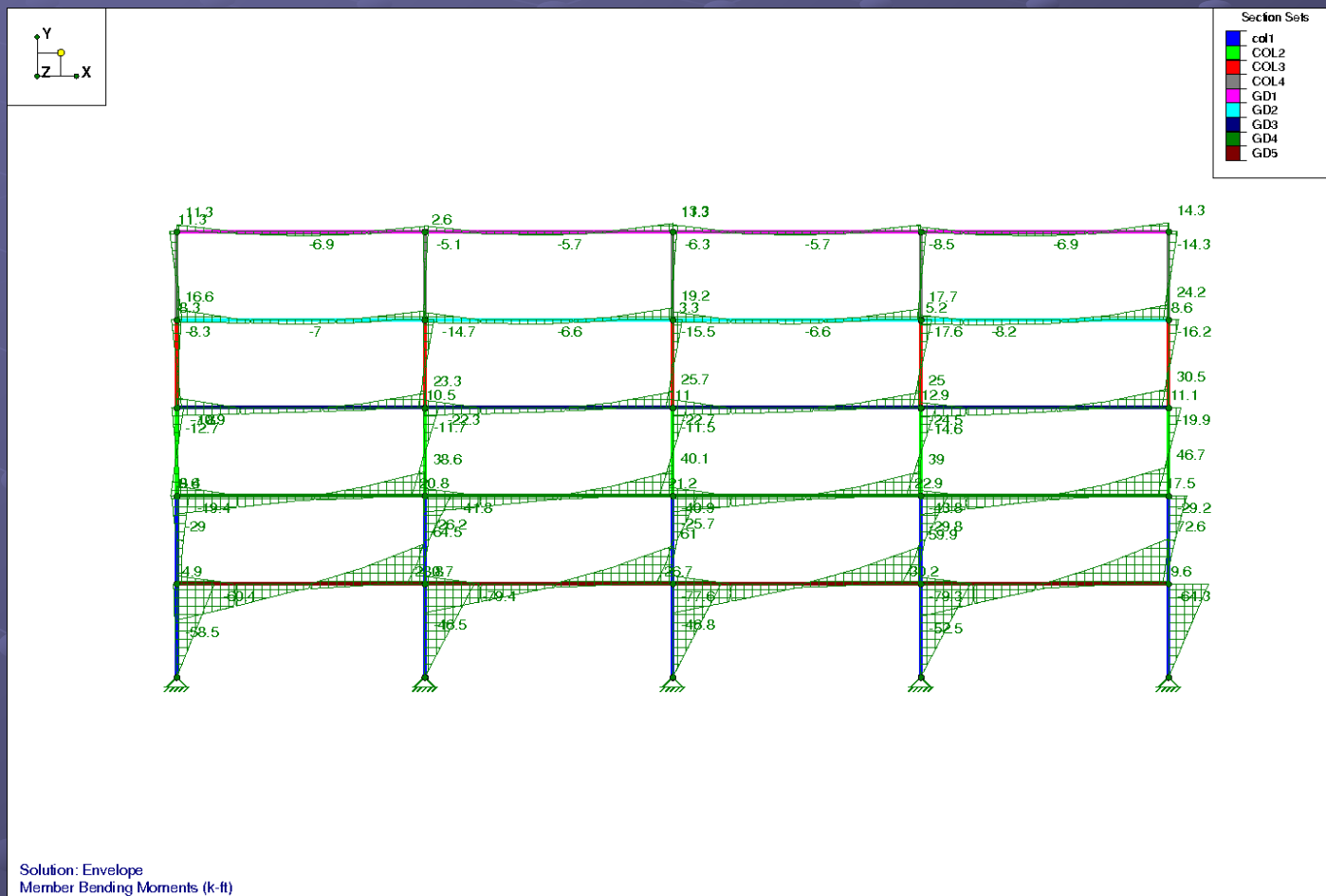
Structural Group – Wind Load

● Braced Frame - Loads



Structural Group – Wind Load

● Moment Frame – Bending Moments



Structural Group - Foundation

● Progress:

- Obtained soil report for site
- Preliminary design for foundation layout

Attended ethics workshop, wrote and submitted the code of ethics for this IPRO

Structural Group - Foundation

- Plan For the Rest of the Semester:
 - Obtain new column loads
 - Meet with soil mechanics professor for advice on soil conditions
 - Plan foundation layout and finish foundation design
 - Prepare structural detailing and create detailed rendering of foundation

Mechanical Group

● Started with:

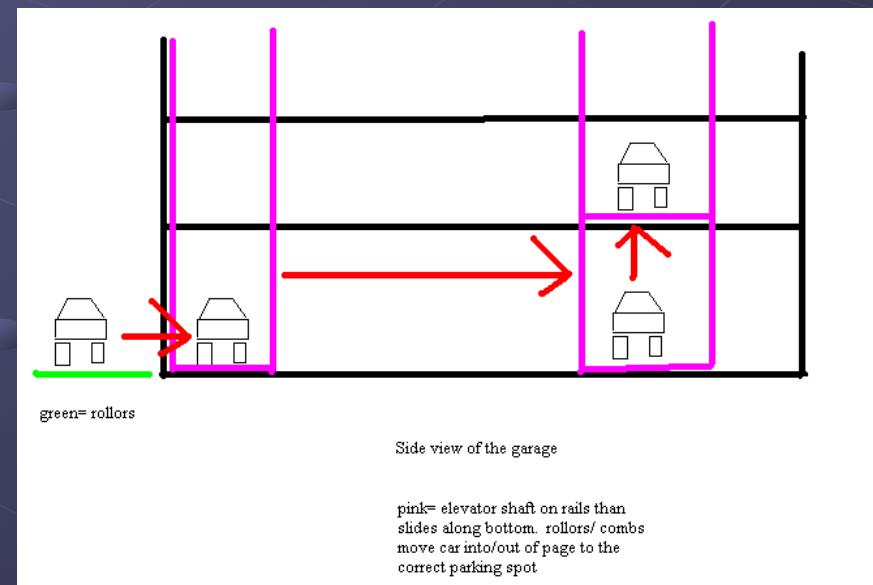
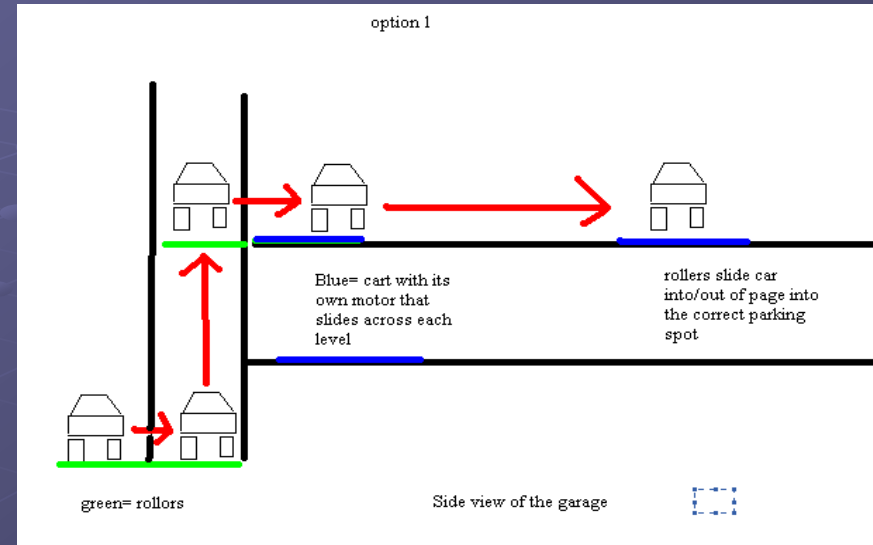
- Motor recommendations
- Design of elevator platform
- Design of comb system



Mechanical Group

Current Work

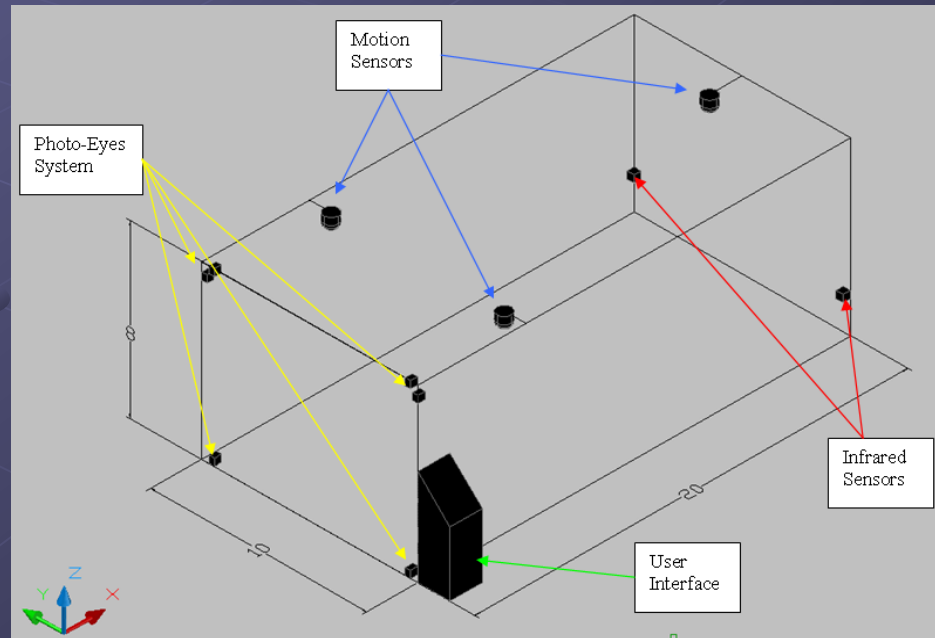
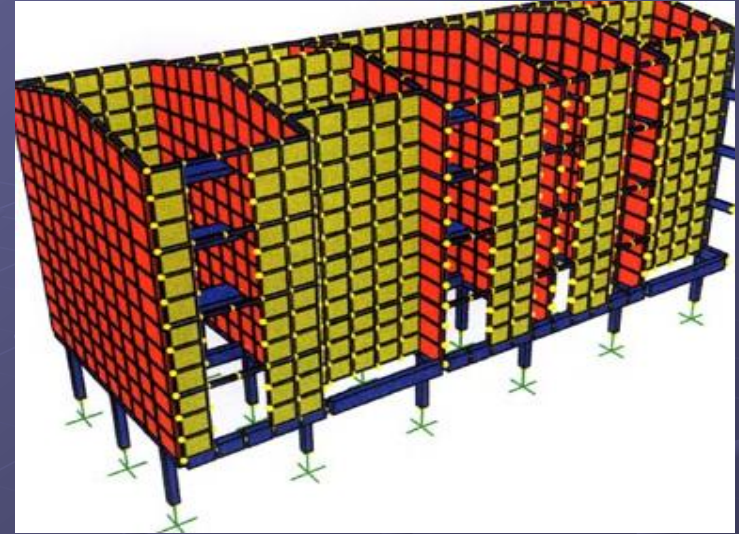
- Research on automated garages
- Analysis of previous semesters calculations and structure
- Motor Selection / Safety Consideration
- Vibrations Analysis Research



Mechanical Group

Future Goals

- Vibrations Analysis
 - SAP 2000
- Possibly design different elevator structure
- Alternative power
- Green Roof
- Human Interface / Sensors



Construction Management Group

● Current Status

- Completed AIA A201 General Conditions Contract
- Completed parametric estimate

● Goals for Spring 2008

- Provide contract documents needed to complete a project manual
- Provide a project cost estimate

Civil Group

● Current Status

Performed site visit to verify dimensions from previous semester's site plan



Project Site

Civil Group

● Previously Completed in Fall 2007

- Preliminary traffic flow
- Preliminary site plan

● Goals for Spring '08

- Design horizontal curves or intersections for traffic flow conditions
- Correct/update site plan

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Question and Comments